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MASSACHUSETTS DEPARTMENT  
OF PUBLIC HEALTH

ANNUAL  
REPORT

GOVERNMENT DOCUMENTS  
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1981

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MASSACHUSETTS  
DEPARTMENT OF  
PUBLIC HEALTH

June 30, 1981

Alfred L. Frechette, M.D., M.P.H.  
*Comissioner of Public Health*  
*Chairman, Public Health Council*

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## FROM THE OFFICE OF THE COMMISSIONER

Despite fiscal constraints and cutbacks in personnel, the Department of Public Health continued to provide the mandated programs and services required to meet the needs of the people of the Commonwealth in the fiscal year that ended on June 30, 1981. Early in the fiscal year, the Department, mindful of the importance of the environment on health, strengthened the Environmental Health Section by appointing a Director of the new Division of Environmental Health Assessment. The establishment of the Division made available, for the first time, a separate, identifiable program by which to assess the actual and potential health effects of environmental agents on the residents of the state.

Staff from the Division, from other programs of the Environmental Health Section, and from the Division of Health Statistics and Research conducted a study of cancer rates in the City of Woburn, in cooperation with the Massachusetts Department of Environmental Quality Engineering, and the Centers for Disease Control (CDC). Results of the study confirmed a high incidence of childhood leukemia and kidney cancer in the city, but failed to establish a definite link between hazardous waste sites in Woburn and the elevated cancer rates. The study also confirmed no significant

excess of cancer deaths in the neighboring communities of Burlington, Lexington, Reading, Stoneham, Wilmington and Winchester.

The study was an outstanding example of cooperation between not only state agencies but a state and federal agency. As the Department continues to assess health effects of environmental pollutants, it anticipates more cooperative studies with staff of CDC.

The publication of Part I of *Massachusetts Standardized Mortality Ratios, 1969-1978*, an extension of an earlier publication, *Mortality Profiles, 1969-1973*, provided information on the health status of the Massachusetts population. The Department expressed the hope that the study would be useful to local boards of health, health care planners, and providers, researchers and the lay public.

After several previous unsuccessful attempts, the Legislature enacted into law a bill supported by the Department to establish a statewide Cancer Registry. The Registry, located within the Division of Health Research and Statistics, will become the repository of cancer data to be used for analysis of, and research on, prevalence and treatment.

As part of its commitment to maintain and improve the health and well-being of the people of the Commonwealth, the Department reaffirmed its support of programs of health promotion and disease prevention. The Statewide Childhood Injury Prevention Program (SCIPP) in the Division of Family Health Services was designed to combat the problem of accidental injury to children. The model program began operating in nine Massachusetts communities in early September 1980. During the summer and fall, the Department's Division of Dental Health sponsored two-day training courses on water fluoridation in conjunction with the Environmental Protection Agency and the Department of Environmental Quality Engineering. The course was part of the state's continuing efforts to ensure quality

performance in fluoridating public water supplies. By the end of the fiscal year, three million residents, approximately 51 percent, were receiving the benefits of fluoridated water. The Department is aiming to have an additional quarter of a million persons added to that number each year until 1990 to achieve nearly universal fluoridation.

After extensive clinical trials, a specific immune globulin, varicella-zoster immune globulin, received approval for federal licensure. Produced by the Department's Division of Biologic Laboratories, State Laboratory Institute, the vaccine can be used safely to prevent overwhelming chickenpox in children with leukemia.

During fiscal year 1981, the Department also continued its efforts to reduce unnecessary and duplicative regulations. The Division of Health Care Quality carried out, in two areas of the state, a survey-by-exception project based on the concept that nursing homes providing good quality care can be identified, and should not be subjected to the full annual licensure-certification survey. The time that would have been spent on those homes was redirected to consultation and monitoring at the 15 percent of the state's nursing homes whose care is below accepted quality. Fifty-six facilities were surveyed under the new abbreviated method. As a result of the demonstration project, the federal Department of Health and Human Services approved extension of the new survey methods to the entire state.

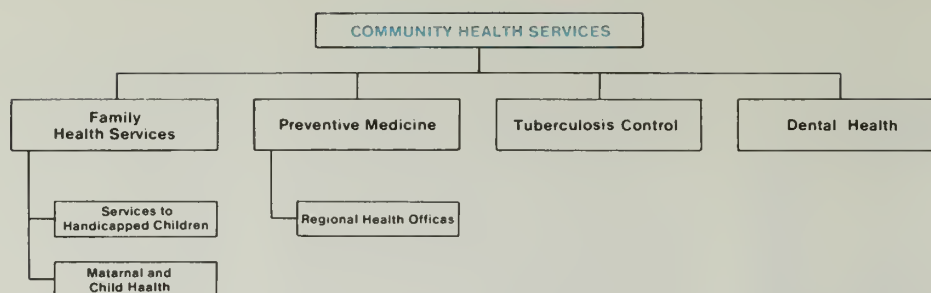
This 67th Annual Report\* is a brief accounting of the activities of the Department of Public Health during a year in which the Department sought to maintain old services and to provide new ones in a period of change and challenge.

*Alfred L. Frechette*

Alfred L. Frechette, M.D., M.P.H.  
Commissioner

\*In 1914, the Legislature passed an act dissolving the Massachusetts Board of Health and creating the State Department of Public Health.





## COMMUNITY HEALTH SERVICES

The Community Health Services Section, under the direction of an Assistant Commissioner, consolidates the activities of the Divisions and units that provide direct services to the people of the Commonwealth: the Divisions of Family Health Services, Preventive Medicine, Tuberculosis Control, and Dental Health, and the Regional Health Offices. After its first full year of operation, the section has recorded greater sharing of related activities, an increased potential for community services, and better coordination of programs.

### FAMILY HEALTH SERVICES

Improved health services to mothers and children in the Commonwealth remained an important part of the Department's total effort to upgrade community health. Two components of the Division of Family Health Services — Services to Handicapped Children and Maternal and Child Health — carry out the responsibilities mandated under Title V of the Social Security Act of 1936.

#### Services to Handicapped Children

The primary goal of the Services to Handicapped Children (SHC) is the identification of handicapped children at an early age so that they may have an opportunity to develop to their greatest potential. Three units of SHC worked to achieve that goal:

- The SHC Clinic Unit provided or contracted for services to approximately 9,000 children with many

handicapping conditions: orthopedic, neurologic, cardiac, plastic, oro-facial anomalies, myelodysplasia, hemophilia, cystic fibrosis, and inborn errors of metabolism. No new clinics were opened during the year. Initial plans were underway, however, for a new cystic fibrosis clinic at the University of Massachusetts Medical Center in Worcester to provide services for patients from the central Massachusetts area who have been receiving care in Boston.

- The Community Services Unit provided a range of specialized services to multiply handicapped children to allow them to function as independently as possible and to remain in the community with their families. The Division purchased services — educational and therapeutic, home care, respite and residential care, and training — from communities to aid families. An added award of \$32,000 from the Massachusetts Development Disabilities Council allowed 340 handicapped children (110 more than in fiscal year 1980) to attend summer camp programs.

- The SHC Genetics Unit was established in October 1980 to begin a genetics-testing and counseling program in the Commonwealth. A three-year grant awarded to the Division in February 1981 by the federal Bureau of Community Health Services, under terms of the National Genetic Diseases Act, provided funds for the program, which includes an Advisory Committee for Genetic Services comprised of both consumers and professionals; staff of the Genetics Unit to coordinate educational, administrative, and research activities; and delivery of statewide services through the regional SHC clinics and a coordinated network of comprehensive genetics clinics at major medical centers. A statewide toll-free number was made available to encourage access to genetic information.

#### Maternal and Child Health

Four major units of the Division's Maternal and Child Health Services worked to provide mothers and children in underserved neighborhoods with a wide range of preventive health services.





- The Primary Care Unit began a major reevaluation of the primary care programs established under Title V. No new programs were established. The 27 functioning programs, including the 23 comprehensive Maternal and Infant Care (MIC) and Children and Youth (C&Y) projects, reached an estimated 20,000 women and children at a total cost of \$2.9 million.

- Closely related to the MIC and C&Y projects, the Women, Infants and Children's Supplemental Food Program (WIC), working through 35 local agencies, provided services to 36,000 clients, of whom 25 percent were women, 25 percent infants, and 50 percent children under the age of five. The report of the Massachusetts WIC Evaluation Project dramatically illustrated the positive effect of the WIC Program on the health status of mothers and children in the Commonwealth. Major findings indicated: the WIC Program was reaching high-risk populations, especially teenagers; WIC was correlated with increased birth weight and increased prenatal care. Nutritional counseling and health education helped high-risk families improve their daily diets, and encouraged mothers to breast feed their infants.

- The Services to School-Age Children/Adolescent Unit worked to establish and promote standards for health examinations and assessments of schools throughout the Commonwealth, and to promote optimal health through screening and health education. Three renewed contracts totaling \$144,386 were awarded to promote model approaches; 39 school districts, serving about 20 percent of the total public school enrollment, on waiver of mandated school health procedures, received technical assistance and consultation to develop more flexible, innovative school health programs.

Over 1,000 school personnel received training or refresher courses in conducting vision and hearing testing in the schools. Unit staff

repaired without charge 503 pieces of equipment used in these testing programs. In accordance with state requirements, financial eligibility guidelines were established, for the first time, in fiscal year 1981 for the Division's Hearing Aid Program. As a result, only 402 hearing aids were purchased for 292 children as compared to approximately 1,000 aids for 700 children in the previous fiscal year. To effect a smooth change from a voluntary program of postural screening for scoliosis to a mandatory one for all school children in grades five through nine, physical therapists from the central and regional offices conducted inservice education for 123 school districts.

Adolescent health and family planning comprised a strong subsection of the Services for School Age Children/Adolescent Unit. Ten renewed contracts totaling \$415,000 provided comprehensive care to adolescents of both sexes, and to adolescents at risk for substance abuse, venereal disease, pregnancy, and early parenthood. The programs registered over 30,000 visits by adolescents. Approximately 500 pregnant or parenting adolescents received intensive services either through special clinical programs or in the schools. Educational sessions reached over 18,000 persons — teens, parents, and professionals.

- The Statewide Childhood Injury Prevention Program (SCIPP) was developed by the Department in 1979 with funds from the federal Office of Maternal and Child Health to study how to establish and implement childhood injury-prevention programs based in the community. With the cooperation of both public and private agencies, SCIPP organized projects targeted toward specific injury risks in young children in 14 Massachusetts communities. Three intervention and three matched control sites were chosen.

Since October 1980, five coordinated injury prevention projects

in half of the communities were underway as part of a two-year intervention trial that concentrated on burns, poisonings, household injury hazards, and child auto injuries. Data on all types of injuries have been collected from hospitals and pediatricians that serve the intervention and control communities. In the second year of the project, approximately 10,000 persons participated in one of the five SCIPP coordinated health education projects.

## PREVENTIVE MEDICINE

The Division of Preventive Medicine was created in 1977 to improve the health status of the people of the Commonwealth through a reduction in risk factors such as cigarette smoking, poor nutrition, physical inactivity and unsafe environments.

### Program Administration

A strong component of all Division-supported services and activities is evaluation of process and research to determine effectiveness. In fiscal year 1981, the Division streamlined the requirements for data collection for contracting agencies and improved the efficiency for preparing reports.

The Division completed two major research projects during the fiscal year. The Massachusetts Health Interview Survey, conducted in cooperation with Clark University's Public Affairs Research Center, collected detailed information on health status, health behavior and awareness from a random sample of 1,500 Massachusetts residents. Designed to establish baseline data against which to assess the effect of programs and services, the survey has begun to provide much needed information on health practices and issues facing the state's population.

The second study was a public opinion poll on the regulation and restriction of public smoking, conducted with the assistance of grad-

uate and undergraduate students from Boston-area colleges and universities. Over 3,000 interviews were carried out. The results indicated overwhelming public support for restrictions on smoking in many public places.

### Preventive Health Services

The Division supported several programs that seek to identify, serve, and follow-up specific population and occupational groups for whom the risks of chronic disease and disability are high. Activities included outreach and identification of such individuals, screening and assessment of health needs, referral to appropriate resources, and client monitoring and support services to ensure adherence to prescribed treatment. Three specific programs were operating in 1981:

- *The Public Employee Health Project* provided health services on a demonstration basis to two groups of public employees — firefighters in Fall River, and employees of the Department of Public Health's central offices. The former, a 10-month fitness program, was a collaborative effort of the Division and the Bridgewater State College, Department of Health, Physical Education, and Recreation.

- *Comprehensive Community Hypertension Control Programs* were functioning in 12 communities lacking adequate cardiovascular health care and with populations at high risk for high blood pressure. Programs provided screening, follow-up, monitoring, and health education services at worksites, community health centers, local health departments and other locations. In fiscal year 1981, an estimated 16,000 persons were screened and, when appropriate, referred for additional clinical care.

- *Women's Health Initiatives*, formulated during the preceding fiscal year, were put into operation in 1981. Women in Step with Health, based at Clinton Hospital in northern Worcester County, established preventive health services

for approximately 600 women living in the six-town area bordering on the hospital. The projects have begun to compute results of screening and referral services to establish baseline data on the health status of women not normally included in such programs.

### Health Promotion Services

The Division's programs to prevent cigarette smoking and alcohol abuse were targeted primarily at adolescents. School-based smoking prevention programs, carried out by local school administrators, were established in 11 school districts. Over 3,000 students received health education, as well as training in peer leadership development, communication, and decision-making skills. The Division developed a program to provide teachers with the skills required for the development and design of health education programs, as well as practical training in the use of curricula focusing on smoking and alcohol.

### Public Health Education and Information

The Division used the media and other informational sources to pre-

sent material on the reduction of risks associated with poor nutrition, cigarette smoking, physical inactivity, and unsafe environments. Several successful projects were developed and implemented. "Second-Hand Smoke" was the theme of a cooperative project of four New England State Health Departments — Massachusetts, Connecticut, Rhode Island and New Hampshire — that reached hundreds of thousands of residents of the four states.

The Division also participated in a national effort to increase public awareness of the importance of controlling high blood pressure by distributing special materials for the state's minority communities. During May 1981, High Blood Pressure Awareness Month, the Division sponsored a special informational program at the State House that included the taking of blood pressure readings of members of the Legislature.

The Massachusetts Nutrition Resource Center (MNRC), established in 1979, provided educational and training services to providers and consumers throughout the state. During the year, MNRC registered a 31 percent increase in pro-





vider/consumer contacts through the Nutrition Hotline, and a 22 percent increase in contacts through mail inquiries. In addition, MNRC worked with the Division to develop special educational and training projects for adolescent pregnancy, nutritional needs of the elderly, and food additives.

The Child Passenger Safety Resource Center began full-scale operation in fiscal year 1981, and focused on infants and preschool children. The Center provided training and educational services to 1,000 health care professionals and to the public on the proper use of child passenger restraints.



## TUBERCULOSIS CONTROL

The Division of Tuberculosis Control has major responsibility for the surveillance of tuberculosis in the Commonwealth, as well as for the development of programs to control and eradicate the disease. To this end, the Division promotes many activities, either directly, by contract, or in collaboration with local boards of health, hospitals, and physicians. During the fiscal year, the Division continued to provide the following services:

- A network of inpatient and ambulatory programs in community hospitals, to make tuberculosis diagnostic and treatment services accessible and available to residents of every city and town in Massachusetts.
- A central bacteriological laboratory to provide statewide tuberculosis diagnostic and treatment-monitoring services to physicians.
- Contractual purchases and distribution of tuberculosis drugs, for treatment and preventive therapy, through tuberculosis clinics.

- Maintenance of a statewide tuberculosis case register for surveillance of the disease, with a reciprocal exchange of information with other states and the federal government.

Despite the availability of therapeutic drugs, tuberculosis has not been eradicated anywhere in the United States; some states have recently experienced an increase in the number of cases. In calendar year 1980, the number of newly diagnosed cases in Massachusetts, however, declined by 5.04 percent — 452 cases as compared to 476 cases in 1979. The 1980 case rate also showed a decline from 8.2 percent per 100,000 population to 7.8, a rate below that of the nation as a whole (12.3 per 100,000 in 1980 as compared to 12.6 in 1979). Both the case rate and the number of newly reported cases of tuberculosis in the state have shown a steady, gradual decrease since the early 1950's. This trend could change, however, with the immigration of more Indochinese refugees into Massachusetts. The Commonwealth now ranks tenth in the nation in the number of Indochinese immigrants, who have a much higher rate of infection with the disease than the state's resident population.

The Division of Tuberculosis Control has taken a number of steps to reduce its medical care costs without adversely affecting quality of care. Some of the major cost-effective steps have been:

- A substitution of ambulatory care for inpatient care throughout all or most of the treatment period, with a resultant precipitous decline in patient days from 265,000 in calendar year 1964 to 6,164 in calendar year 1980.
- Medical audits of inpatient care, which have helped shorten the average length of hospital stay from 157.5 days in fiscal year 1965 to 46.3 days in fiscal year 1981.
- The development of acute-care contracts with 44 community hospitals to provide short-term inpatient care.

The Division has thus been able to maintain an effective program and, at the same time, reduce its budget over the past two decades. In 1964, the budget of the Division of Tuberculosis Control amounted to \$5.6 million and represented 21 percent of the Department of Public Health's total budget. In fiscal year 1981, the Division's budget, despite inflation, amounted to \$3.0 million

and represented less than 3 percent of the Department's total budget.

New activities of the Division of Tuberculosis Control in 1981 were as follows:

- The Division submitted legislation, enacted into law as Chapter 71, Section 55B, Massachusetts General Laws, under which teachers and other school personnel will no longer be screened for tuberculosis every three years. The new law is expected to save the Commonwealth and cities and towns \$280,000 in reduced nursing, clerical, record-keeping time, as well as reduced X-ray costs and tuberculosis-testing supplies.
- In cooperation with representatives of the American Lung Association, the Division published "Role of the Voluntary Association, Volume 5 of the State Plan for the Control and Eradication of Tuberculosis."
- A tuberculosis clinic was opened at the University of Massachusetts Medical Center, under contract with the Division, to provide ambulatory services to the residents of central Worcester County.
- The Division participated in a study of a mycobacterium closely related to *Mycobacterium tuberculosis*. The results of the investigation, "A Demographic and Environmental Study of Infection Due to *Mycobacterium Intracellulare Avium* in Massachusetts, 1972-1979," showed a steady increase in cases.

## DENTAL HEALTH

The Division of Dental Health, in its second year of reactivation, grew and expanded its activities in the prevention and control of oral diseases in Massachusetts. Work of the Division encompassed:

- *Prevention of Oral Diseases* — The Division assumed responsibility for administering the \$320,000 federal Fluoridation Grant, a sum twice that of the previous year. Monies were used to purchase fluoridation equipment and chemicals for six Massachusetts communities with a population of 263,000, and replacement equipment for four communities with a population of 132,021. The grant allowed the Department to establish a fluoridation monitoring and surveillance program for 89 cities and towns that serve 3,000,000 residents. The Division also carried out a statewide public awareness program on the benefits of fluoridation. A poster contest on the theme "Fluoridation Makes Massachusetts Smile" involved over 80 school systems that submitted posters from 1,300 children. During the year, seven local boards of health ordered fluoridation. Three orders were challenged by petition, and three referenda were held.

The Division was given responsibility for school-based fluoride mouth-rinse programs in 10 communities in fiscal year 1982. These programs were funded in 1981 by the Division of Preventive Medicine.

The Division provided technical assistance to dental personnel in 89 cities and towns that offered preventive services or treatment to over half the school-age children in the state. In addition, the Division conducted workshops on the prevention of dental disease; a workshop on implementing school-based fluoride programs was attended by 70 publicly employed dental hygienists.

- *Dental Care* — Dental care for the poor and disadvantaged has been provided by many separate state and federal programs. The Division of Dental Health conducted its program at four hospitals. It also worked with the Dental Medicaid Program to establish a system of review of certain dental services to ensure their appropriateness for Medicaid recipients, and with Medicaid's Project Good Health Program to improve dental use among the enrolled children. The Division cooperated with the Massachusetts Rate Setting Commission to establish a revised rate structure for dental services.



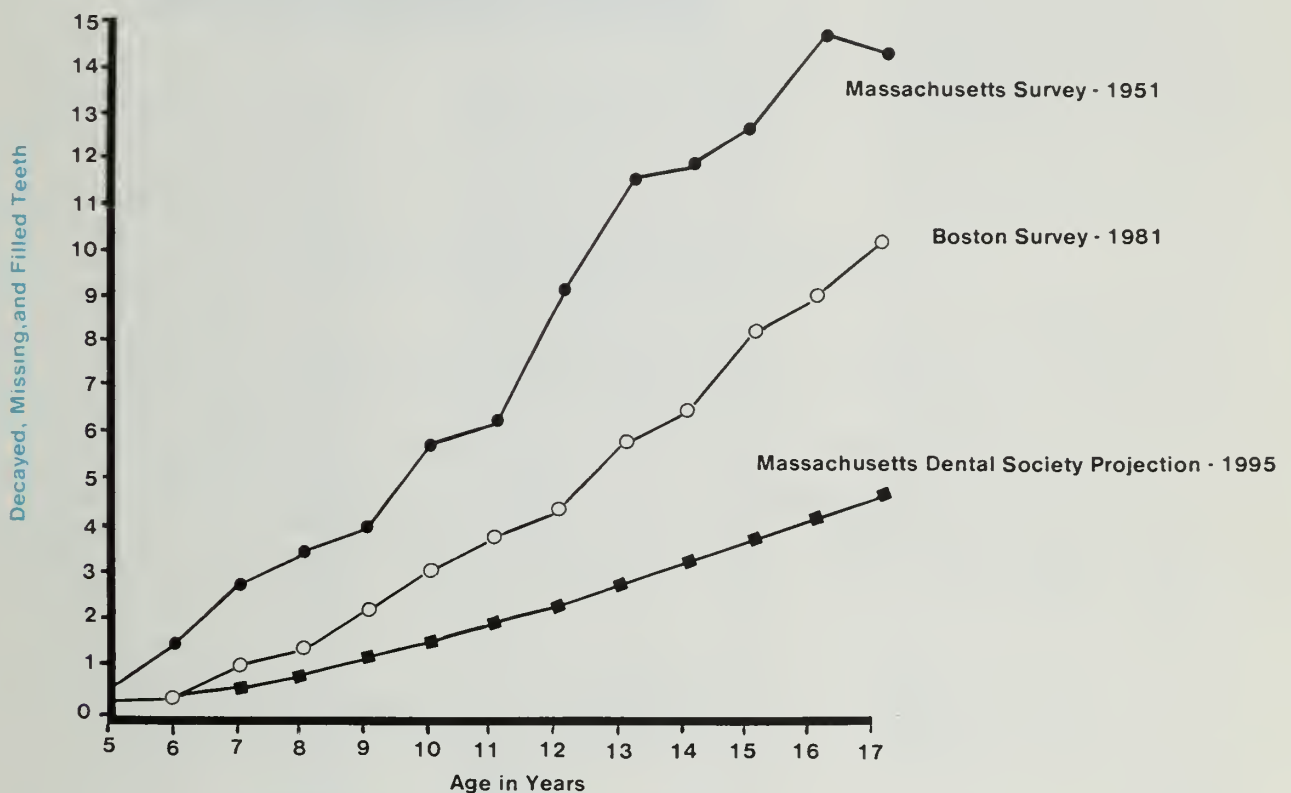


To coordinate and improve referral activities among different agencies that provide dental care to the developmentally disabled and handicapped, the Division helped convene a committee of representatives of the Tufts Dental Facility for the Mentally Retarded, the National Foundation for Dentistry for the Handicapped, the Oro-Facial Program of the Department's Services to Handicapped Children, the Dental Clinic of the Shriver Center, and the Massachusetts Dental Society.

As the dental needs of the elderly in nursing homes have increased, the Division and the Massachusetts Dental Society established a special Dental Nursing Home Committee. The Division and the Dental Society worked to establish guidelines for the care and treatment of nursing home patients.

- *Dental Education and Training* — During the fiscal year, the Division offered training in dental public health to six student interns from dental schools and public health programs.

- *Research in Dental Public Health* — The Department contracted with the Forsyth Dental Research Center for a survey of the oral health of Massachusetts children. The last survey had been conducted in 1951. The Boston section of the updated survey was completed in 1981. Findings showed a 40 percent decrease in the prevalence of tooth decay among these school children as compared to the state-wide results in 1951 (Fig. 1), a high level of treatment, and a negligible ratio of missing teeth.



**Figure 1. Decayed, Missing and Filled Teeth by Age:**  
Comparison of Boston Survey to Massachusetts Survey of 1951-2.

## REGIONAL HEALTH OFFICES

The scope of activities of the Department is reflected in the local health services provided by the four Regional Health Offices in the state. These offices coordinate the Department's general field activities and act as intermediaries between central service programs, local health agencies, and citizen groups. Despite a shortage of funds and personnel, regional staff were able to carry out their multifaceted activities and responsibilities. These are the same for all the Regional Health Offices and can be summarized as follows:

- Technical assistance — for sanitary programs and consultations on nursing, social work, and nutritional programs.
- Regulatory — application and regulations of the State Sanitary Code and Food and Drug laws; inspection of prisons and certification of migrant labor camps.
- Direct patient services — the provision of either direct services or contracts with other medical agencies. These activities include the programs of the Services to Handicapped Children, rehabilitation programs, family planning, and other programs of the Divisions of Family Health Services, Preventive Medicine and Dental Health.
- Inservice educational programs — for local nurses, sanitarians, nutritionists, physical therapists, social workers, and members of local boards of health.

Some examples from each region indicate the diverse activities of all the Regional Health Offices:

- *Central Region* — Assistance was provided to local boards of health in the investigation of two major food-borne illnesses involving 114 positive cases, an outbreak of Legionnaire's



Photo: Transcript, North Adams

Disease, measles in a private school, and meningitis among children in a family day-care center. Sixteen communities, an increase of six over the previous fiscal year, participated in the Fluoride Mouth-Rinse Program, which reached approximately 9,000 school children, an increase of nearly 6,000 over the previous year.

- *Northeastern Region* — The health education coordinator prepared and distributed a questionnaire on hospital-based child auto restraint programs and arranged inservice training for nurses from maternity units. Two physical therapists did screening for scoliosis at sites of the Massachusetts Migrant Labor Program. Positive cases were enrolled in the regular SHC clinics. Nurses in the cardiac, cerebral palsy, myelodysplasia, and neurology clinics worked with other clinic nurses in the state to develop teaching materials for use with parents.
- *Southeastern Region* — The annual up-dating of information on local boards of health continued with their coopera-

tion. The yearly "Regional Profile" was compiled and sent to all cities and towns in the region with the mailing of the new questionnaires. Social workers acted on behalf of 110 children under provisions of Chapter 766 by participating in core evaluations, serving as advocates for appropriate programs and the mainstreaming of handicapped children.

- *Western Region* — The program development specialist continued to represent the Department on the Region's Interdepartmental Team, which meets under the auspices of the Office for Children. The program development specialist and the public health nursing advisor represented the Department on the Department of Education's Regional Review Boards for the Springfield and Pittsfield areas. Several staff members represented the Department in planning with the Franklin/Hampshire Area Service Planning Team, Western Massachusetts Health Planning Council, and the Task Force for Western Massachusetts Hospital.

## COMMUNICABLE/ VENEREAL DISEASE CONTROL

The Division of Communicable and Venereal Diseases carries out health protection activities that are the direct responsibility of state government. These encompass health surveillance and disease control to guard the health of the people of the Commonwealth through testing, vaccination, treatment, analysis of disease trends, and the assessment of threats to the population.

## COMMUNICABLE DISEASE CONTROL

The statewide immunization programs of the Department, which expanded as new vaccines became available, continued to record progress in controlling measles, mumps, and rubella:

- Measles down from 19,512 cases in 1965 to 59 cases in 1980, a decrease of over 99 percent.
- Mumps down from 9,024 cases in 1968 to 130 cases in 1980, a decrease of 99 percent.
- Rubella down from 1,461 cases in 1969 to 76 cases in 1980, a decrease of 95 percent.

These programs not only prevented illness and death but saved the Commonwealth approximately \$16,000,000 in actual costs for medical care and institutionalization of patients.

Massachusetts, which has been on a maintenance immunization program against polio since polio vaccine became available, has not had a single reported case of polio since 1968. A total of 442,946 doses of trivalent Sabin oral polio vaccine were administered by local boards of health, private physicians, clinics and hospitals. The annual immunization survey of children (67,665) entering kindergarten showed more than 98 percent in 1980 had already received three or more doses of polio vaccine. The percentages of these children immunized against polio and the six other immunizable diseases showed impressive increases over 1975 (Table 1).

During the 1980-1981 school year, the Division of Communicable and Venereal Diseases also surveyed more than 100,000

**Table 1.**  
Percentage of Immunized Children Entering Kindergarten  
1973 - 1981.

|   |     | 1973-74 | 1974-75 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 | 1980-81 | Percent<br>Increase Over<br>1973-74 |
|---|-----|---------|---------|---------|---------|---------|---------|---------|---------|-------------------------------------|
| Diphtheria<br>Tetanus<br>Whooping Cough<br>Polio<br>Measles<br>Mumps<br>Rubella | DTP | 88.6    | 93.51   | 95.04   | 96.21   | 95.82   | 96.99   | 97.57   | 98.10   | 10.72                               |
|   |     | 86.2    | 92.04   | 94.10   | 95.84   | 94.25   | 97.50   | 97.95   | 98.13   | 13.84                               |
|   |     | 90.3    | 93.53   | 94.60   | 96.21   | 98.32   | 98.60   | 98.86   | 99.09   | 9.73                                |
|   |     | 59.3    | 69.19   | 78.00   | 84.56   | 89.83   | 92.79   | 98.69   | 99.06   | 67.05                               |
|   |     | 62.0    | 70.41   | 78.51   | 84.35   | 90.04   | 93.32   | 98.67   | 99.06   | 59.77                               |
|   |     |         |         |         |         |         |         |         |         |                                     |

**Table 2.**  
Percentage of Immunized Children in Day Care Centers  
1975 - 1981.

|   |     | 1975-76 | 1976-77* | 1977-78 | 1978-79 | 1979-80 | 1980-81 | Percent<br>Increase Over<br>1975-76 |
|---|-----|---------|----------|---------|---------|---------|---------|-------------------------------------|
| Diphtheria<br>Tetanus<br>Whooping Cough<br>Polio<br>Measles<br>Mumps<br>Rubella | DTP | 86.73   | —        | 90.99   | 94.23   | 95.60   | 95.94   | 10.62                               |
|   |     | 85.71   | —        | 89.83   | 94.91   | 96.13   | 96.70   | 12.82                               |
|   |     | 89.31   | —        | 93.22   | 95.83   | 96.79   | 97.54   | 9.22                                |
|   |     | 77.27   | —        | 85.93   | 92.78   | 96.28   | 97.29   | 25.91                               |
|   |     | 76.00   | —        | 85.36   | 92.46   | 96.27   | 97.31   | 28.04                               |
|   |     |         |          |         |         |         |         |                                     |

\*No survey had been conducted in 1976-77.



school health records of new children entering grades one to 12 in both public and private schools. Immunization levels for these children were as follows: DTP, 95 percent; polio, 95 percent; measles, 97 percent; mumps, 97 percent; and rubella, 92 percent. The Division continued its survey of children (60,771) in day care centers and found substantial increases over the previous years (Table 2).

Recent improvement in the rubella immunization level of children in Massachusetts has resulted in rubella becoming a disease of adults. Of the cases reported in 1974, 20 percent were of adults as compared to 32 percent in 1980. This trend will probably continue since more than 91 percent of children under 18 years of age are protected with the vaccine. The Division has, therefore, continued with the rubella program for adults, started in 1979 and targeted at four main groups: students in institutions of higher learning, persons 30 years of age and younger who provide patient care in hospitals and other health facilities, students and staff in schools of nursing, and patients in obstetrical-gynecological and family planning clinics.

Carry-over funds from the United States Public Health Service were used to carry out the influenza immunization program for high-risk persons. During the flu season, 175,462 persons were immunized, an increase of 4.7 percent over the previous year's program, and a substantial increase of 18.5 percent over the 1978-1979 program. The success of the program indicated that the credibility lost as a result of the 1976-1977 Swine Flu Program has, in large measure, been overcome.

The results of the Commonwealth's public pneumonia immunization program for the elderly, carried out in February 1978, indicated that the vaccine was safe,

cost-effective, and reduced mortality by 10 percent among the elderly who had contracted pneumonia. Since the initial field testing of the pneumococcal pneumonia vaccine, approximately 500,000 high-risk persons have received pneumonia immunization in the state. Nevertheless, pneumonia morbidity and mortality among high-risk Massachusetts residents continues to be a growing concern. The Division has, therefore, again recommended simultaneous administration of influenza and pneumonia vaccines in different sites.

The reported incidence of babesiosis, a malaria-like illness for which no effective chemotherapy is now available, has been increasing. In Massachusetts, a focus of the disease exists on the islands of Nantucket and Martha's Vineyard. In fiscal year 1981, eight identifiable cases were reported — six on Nantucket, one on Martha's Vineyard, and one, a Dalton woman, aged 79 years. The latter patient had acquired the disease via a transfusion. Neither she nor the male blood donor had visited the Islands, although the donor had been on National Guard duty at Falmouth about six weeks before the donation.

## VENEREAL DISEASE CONTROL

In accordance with national standards, the Division of Communicable and Venereal Diseases concerns itself with the 16 sexually transmissible diseases. Of these, seven — gonorrhea, trichomonas vaginitis, monilial vaginitis, genital herpes, genital warts, nongonococcal urethritis and scabies — remained epidemic in Massachusetts and in the nation. Massachusetts had about one and one-half cases of male gonorrhea to once case of nongonococcal urethritis, which may soon become the number one venereal disease in the United States. Scabies, however, was on the downward curve of the epidemic cycle. Because of the increase in the cases of nongonococcal urethritis and of genital herpes (also important for its oncogenic potential), the Division has planned to include these two diseases in the list of reportable diseases as soon as staff are available. Herpes type 2, for which there is now no specific treatment, made up 10 percent of the Division's clinic load.

For the first time since 1973, reported cases of gonorrhea and all types of syphilis showed an increase (Figs. 2 and 3). The 10,795 cases of gonorrhea reported in calendar year 1980 represented an increase of 9.2 percent over 1979, but constituted a 25.6 percent increase over the 8,026 cases reported a decade earlier. Gonorrhea continued to be the number one communicable disease in the state (Fig. 4).

For calendar year 1980, the reported number of patients with syphilis was 904, an increase of 9.3 percent over the 827 cases in the previous year. An important factor in the Division's efforts to control the spread of the disease was the syphilis interview-contact-tracing procedure, used by the Division's staff in the 21 cooperating state venereal disease clinics with 97 per-



cent of the 557 early syphilis cases reported to the Department of Public Health.

The Department's program for the screening of asymptomatic women for gonorrhea control continued with the renewal of a federal grant for \$488,061. During the calendar year 1980, the program examined 137,633 women by culture at approximately 100 participating facilities. Of the women examined, 4,954, or 3.6 percent, approximately the same percentage as in the previous year, were found to have the disease.

The grant also allowed the Division to continue its program for the diagnosis, treatment, and epidemiology of gonococcal pelvic inflammatory disease (PID), which have become important aspects of gonorrhea control. Protocols with standards for the diagnosis of gonococcal PID, which had been established by the Division, continued in over 30 hospitals located in areas of high incidence. Measures for ensuring the rapid epidemiologic follow-up of contacts, many of whom are asymptomatic men, were maintained. During calendar year 1980, 393 cases of gonococcal PID, approximately the same number as in the previous year, were reported.

The 21 cooperating state venereal disease clinics in the outpatient departments of general hospitals had 47,208 patient visits for examination and treatment during the fiscal year. The cost, which included diagnosis, laboratory work, treatment, and epidemiologic investigation, was approximately \$23.91 per patient visit.

The Division provided clinical and epidemiological training to 225 medical students from the Boston University and Tufts University Schools of Medicine. Physicians and nurses also received instruction in venereal disease control.

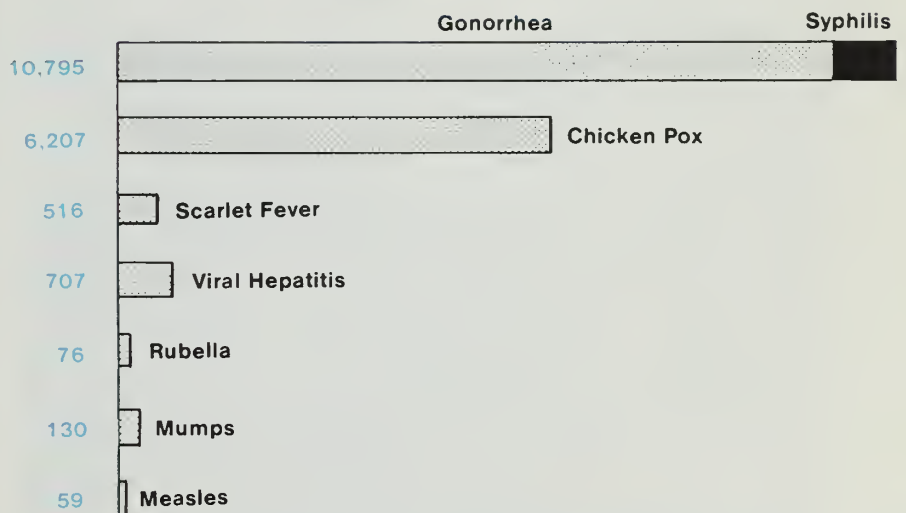
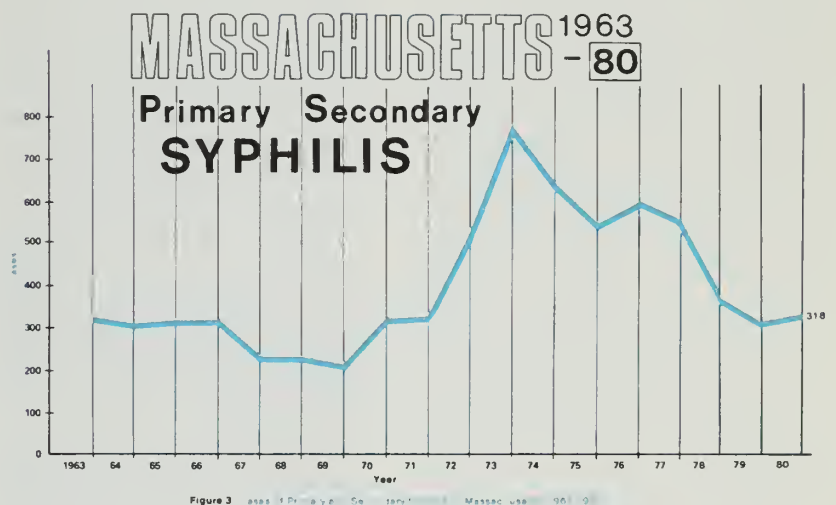
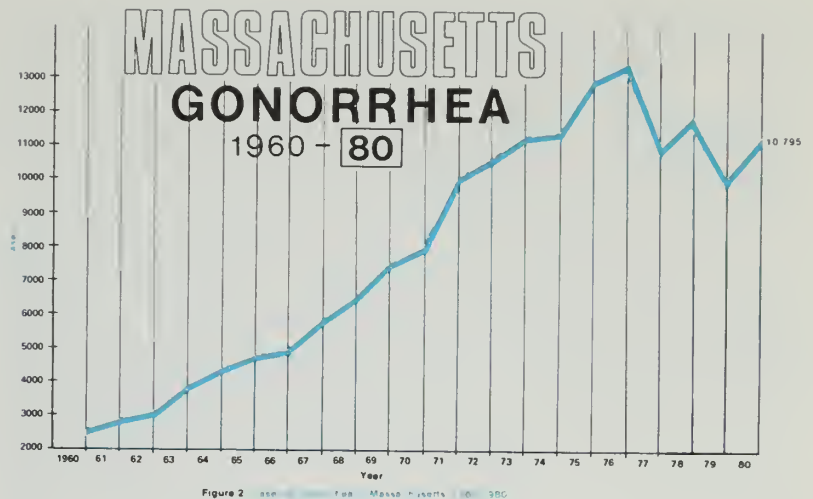
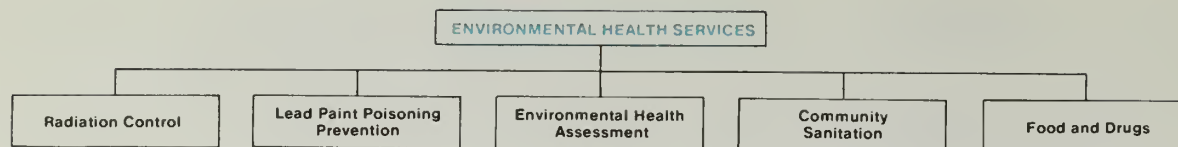


Figure 4. Communicable Diseases in Massachusetts, 1980.



## ENVIRONMENTAL HEALTH

The Environmental Health Section, which completed its second year of operation on June 30, 1981, included the Divisions of Radiation Control, Food and Drugs, Community Sanitation, and the Lead Paint Poisoning Prevention Program. In response to a growing concern among health professionals and the public about the possible toxic effects of such environmental hazards as organic chemicals in drinking water, *Gonyaulax tamarensis* ("Red Tide"), polychlorinated biphenyls (PCBs) and methylmercury in shellfish, elevated levels of oxides of nitrogen from energy plants, as well as other known and potential hazards, the Department established within the Environmental Health Section a Division of Environmental Health Assessment.

### ENVIRONMENTAL HEALTH ASSESSMENT

The Division of Environmental Health Assessment, which includes experts in epidemiology, toxicology, environmental hygiene, and health standards and criteria, was set up to respond immediately to, and evaluate, health threats posed by environmental hazards. The Division has worked closely with the Department of Environmental Quality Engineering (DEQE), the Division of Food and Drugs, and other state and federal agencies to monitor environmental hazards and their effect upon the health of the public.

In its first few months of operation, the Division was able to provide consultation to local boards of health and to other state agencies. It worked in collaboration with other divisions of the Department of Public Health, as well as with the Harvard School of Public Health, and the University of Massachusetts Medical School on research and health projects. In cooperation with the Centers for Disease Control, the Environmental Protection Agency, and the National Institute of Occupational Safety and Health, the Division investigated sites of potential health hazards.

The Division was called upon to assess the health effects of identified hazards, to review environmental health standards, and to make recommendations in the following areas:

- **PCBs** — The presence of polychlorinated biphenyls in New Bedford Harbor and the Hoosic and Housatonic Rivers in the Pittsfield region required closing of the inner New Bedford Harbor, and the institution of anti-pollution measures by the large General Electric plant in the western part of the state.

- **Contamination of Town Wells** — Traces of organic and inorganic chemicals in town wells became a serious problem in Massachusetts. By the end of the fiscal year, 22 town water supplies were deemed unuseable; 26 additional were categorized as at risk and were being monitored frequently. Although the Department of Environmental Quality Engineering is responsible for the monitoring of the state's water supplies, both DEQE and the public have called upon the Depart-

ment of Public Health for an opinion on the possible hazards to the health of the residents of the towns.

- **Industrial Waste** — Contamination of the environment by industrial waste has emerged as a major public health problem. During the fiscal year, the Department evaluated the potential health effects of such wastes in Lowell, New Bedford, and Woburn. With the cooperation of the Centers for Disease Control and the National Institute of Occupational Safety and Health, the Department completed an epidemiological case-control study of victims of childhood leukemia and of victims of cancer of the kidney in Woburn. Less extensive but similar studies have been completed in Quincy, where concern had been expressed over exposure to asbestos, and in Canton, where PCBs had been found.

- **Recombinant DNA** — The Division of Environmental Health Assessment coordinated the Department's evaluation of the potential public health problems associated with the new technology of recombinant DNA in industry and research institutions. The Division also helped draft enabling legislation to regulate this important technology.

### RADIATION CONTROL

The Radiation Control Program, which is responsible for the protection of public health from all sources of radiation, ionizing and nonionizing, carried out surveys of diagnostic and therapeutic X-ray units in hospitals, private medical and dental offices, and of nuclear medicine departments, radioisotope



users, and particle accelerators. Surveys were conducted at universities, secondary schools, and other institutions that are registered to use radioactive materials. Program personnel also surveyed color TV receivers, microwave ovens, video display terminals, devices that use lasers, and various consumer products containing radioactive material.

A major activity of the program was the extensive environmental surveillance and inspection of fixed nuclear power stations — two in Massachusetts and one in Vermont on the Massachusetts border. Personnel visited sites every two weeks to ensure the proper operation of monitoring equipment. Thermoluminescent dosimeters, placed around each reactor to check data received from the power companies, were replaced quarterly.

Staff of the Radiation Control Program, responsible for responding to radiation accidents and incidents throughout the Commonwealth, served as the principal coordinators of the Nuclear Incident Advisory Team (NIAT) and participated in monthly training sessions. NIAT includes consultants from academic and industrial institutions throughout the state.

The Radiation Control Program maintained responsibility for approving plans for radiation protection for all facilities involved in construction, alterations or reconstruction. Surveys for these facilities were conducted after completion of the work. Additionally, personnel served as primary radiation control experts to other state agencies, such as, the Departments of Environmental Quality Engineering, Energy, Public Safety, and Transportation, and the Civil Defense Agency.

During fiscal year 1981, the Radiation Control Program, in cooperation with the Bureau of Radiological Health of the federal Food and Drug Administration, initiated a statewide quality assurance program on dental X-rays called "Dental Exposure Normali-



zation Technique." Every dentist received a radiation detection device attached to a card requiring exposure information. Receipt of the cards allowed staff to concentrate on the estimated 35 percent of the dentists whose machines were outside the acceptable range. As a result of a press release on radioactive gold rings from the New York State Department of Health, the Radiation Control Program surveyed gold jewelry from many persons at both the Boston and Amherst offices. Staff responded to a similar news release on radioactive Fiesta ware by doing surveys of the dinner ware.

A report of the Governor's Advisory Council on Radiation

Protection showed that the Radiation Control Program of the Department was the only state agency with regulatory authority for the disposal of radioactive waste within the Commonwealth. As a result of the report, the Radiation Control Program appointed an ad hoc Oversight Committee to advise the program on low-level waste management.

The participation of the Radiation Control Program in the National Conference of Radiation Control Program Directors and in the New England Radiological Health Compact permitted the Department to cooperate with the other five New England States in radiation health activities.



## LEAD POISONING PREVENTION PROGRAM

The Department's Childhood Lead Poisoning Prevention Program provides screening for children who are at risk, distributes screening samples to health care providers, identifies and works to eliminate lead hazards in the environment, and conducts educational programs for both the medical and lay community on the health hazards of lead. During fiscal year 1981, the laboratory of the program processed more than 88,000 specimens for lead toxicity. Of the approximately 87,000 children screened, 4,000 (5 percent) had elevated levels of lead in their blood.

Staff of the Childhood Lead Poisoning Prevention Program inspected dwellings of all children under the age of six with evidence of lead toxicity. They then inspected homes of children under the age of six upon request by a parent, guardian or owner of the dwelling. Increased requests for inspection outdistanced the field staff's capacity to assist in confirmation, referral for treatment, and hazard abatement. In fiscal year 1981, the staff inspected 700 dwellings and made more than 2,400 reinspections to ensure removal of hazards from the children's environment. Over 300 units were brought into compliance.

As part of its broad program of education for community and professional groups, the Lead Paint Poisoning Prevention Program prepared its staff by organizing in-service training on interpersonal relations, inspection techniques, legal procedures, and current management of children poisoned by lead. In the first six months of 1981, staff held 94 workshops for professional and community groups. Local health officers received instruction in lead poisoning prevention and lead paint inspections. A few local boards of health included lead paint inspections and hazard

abatement as part of their systematic code projects.

In cooperation with the Office of the Commissioner and the budget director, program staff established a fee table for analyzing blood specimens from other states. The estimated number of specimens for the first year was 500.

## DIVISION OF FOOD AND DRUGS

The Division of Food and Drugs is responsible for protecting the public from the harmful effects of chemicals and pesticides, adulterated foods, ineffective surgical devices, unsterilized bedding, and upholstered furniture. The Division is also responsible for the registration of pesticides, licensing of cold storage warehouses, bedding, upholstered furniture and stuffed toys, out-of-state soft drink and frozen dessert plants, manufacturers of methyl alcohol, manufacturers of narcotic drugs and vending machines, sellers of hypodermic needles and syringes, licensing of meat and poultry establishments, and the registration of renderers and manufacturers of animal food, food processors, and out-of-state bakeries.

During fiscal year 1981, the Division's staff made regular inspections as required; 10,655 licenses, permits, certificates and registrations were issued or renewed. New fees for services were set by the Secretary of Administration as mandated by Chapter 572 of the Acts of 1980. Applications for licenses issued after April 13, 1981 were subject to the new fees.

The Division's laboratory analyzed 8,434 samples in the general food area, exclusive of milk. The laboratory also made analyses for charitable organizations with regulatory authority. The Division cooperated with the Massachusetts Departments of Food and Agriculture, Public Safety, Education, Environmental Quality Engineering, and Natural Resources, as well as

with the Office of the Attorney General, the Consumers' Council, and the Alcohol Beverage Control Commission in programs of mutual interest.

Division inspectors stationed at the fish piers in Boston, Gloucester, and New Bedford ensured the wholesomeness of all fish coming into the main piers of Massachusetts. During the fiscal year, the Division made 14,012 seafood inspections, exclusive of inspections for paralytic shellfish poison. Seafood samples collected from the New Bedford area showed trace levels of contamination by polychlorinated biphenyls. Lobsters collected from the outer harbor did not show excessive levels, but lobster fishing in the inner harbor continued to be forbidden.

Demands for analysis of drugs submitted by law enforcement agencies overtaxed the facilities of the Division's laboratories in both Boston and Amherst. The Division analyzed 140,650 samples in fiscal year 1981, an increase of 21.8 percent over the 110,000 samples in 1980. Although marijuana accounted for the largest number of samples, the Division again recorded increases in the use of heroin, cocaine and phencyclidine (PCP, commonly called angel dust).

## COMMUNITY SANITATION

As consumers became more aware of the activities of the Division of Community Sanitation, the work load of the Division increased. Requests for consultation or direct service came not only from the general public but from the Governor's Community Service Office, the Office of the Attorney General, and the Citizens Information Service. Most of the requests related to violation of the Minimum Standards of Fitness for Human Habitation, and general nuisance problems. Direct service for enforcement of the housing code was provided for community residences licensed by the Department of Mental



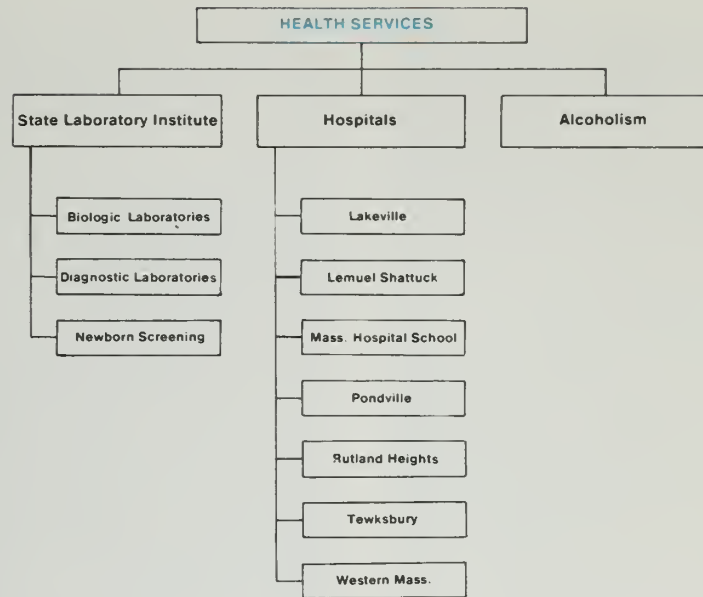
Health and the Office for Children. Water samples were collected from certain foster homes for the Department of Public Welfare.

The semi-annual inspection of all state and county correctional facilities continued. The Supreme Judicial Court ruled in favor of the Department after the Worcester County House of Correction had challenged the validity of the Department's regulations on sanitary standards in correctional facilities. Court officials were ordered to improve conditions at the Deer Island House of Correction as required by departmental regulations and standards.

The Department has a statutory mandate to promulgate regulations for the form and content of medical records and admission physicals for inmates in correctional institutions. During the fiscal year, public hearings were held and such regulations promulgated.

Random inspections of a small number of the state's approximately 450 recreational camps showed an improvement in conditions over the previous year; however, health and safety violations required attention. Three recreational camps for children, cited during the previous summer, were reinspected and found to be markedly improved. Division staff inspected and certified 34 farm labor camps housing 420 farm workers.

Staff also inspected and monitored all fluoridation installations in the state. Plans for installing new units were reviewed for the communities of Peabody, Bedford, Marlborough, Taunton and Lowell.



## HEALTH SERVICES

Through the three components of the Health Services Section — the State Laboratory Institute, the seven public health hospitals, and the Division of Alcoholism — the Department assumes special responsibilities to ensure comprehensive health services and health care to the Commonwealth. The State Laboratory Institute, through its three major divisions, Biologic, Diagnostic, and Newborn Screening, continues to provide a broad range of medical preventive and diagnostic services to protect the health of the people of Massachusetts. The hospitals have worked closely with community groups to develop programs for needed services on both an inpatient and outpatient basis. Detoxification and rehabilitation services are also available through the Department's community-based alcoholism program.

### STATE LABORATORY INSTITUTE

The high quality of services provided by the State Laboratory Institute has been built upon a long

tradition of research and development, a tradition that continued strongly during the 1980-1981 fiscal year. Staff of the Institute contributed extensively to the development of new disease-control policies that are emerging as a result of technical advances. Activities of the State Laboratory Institute fall into the following categories:

- Research and development of new technology
- Performance of a variety of tests on more than one million specimens for clinical purposes
- Production and distribution of serums and vaccines for use throughout the year
- Diagnosis of rare or exotic disease
- Establishment of new diagnostic tests.

Many of these services represent the technical base that guides other activities of the Department.

The Institute has increasingly provided central support services and certain administrative services for additional programs housed at the Institute but managed by other sections of the Department of Public Health, such as, the Food

and Drug Program, the Lead Paint Poisoning Prevention Program, and the Radiologic Health Laboratory; and for other Departments, such as, the Racing Commission Laboratory and the Biochemistry Laboratory of the Department of Mental Health.

## BIOLOGIC LABORATORIES

The Division of Biologic Laboratories not only maintained its traditional capacity for supplying schools, public clinics, and institutions with established vaccines and serums, but also made several breakthroughs, the importance of which has spread beyond Massachusetts. These included:

- *Federal Licensure of Varicella-Zoster Immune Globulin* — This event received international press coverage. The new preventive vaccine is effective against life-threatening chickenpox exposures of children with leukemia or whose defenses have been weakened as a side effect of other medical practices. The Biologic Laboratories are the sole supplier in the United States and the only world supplier licensed by the Food and Drug Administration (FDA).

- *Shick Test Materials* — The Biologic Laboratories have been certified as the sole national supplier of shick test toxin. This material can be used to evaluate the functioning of the immune system of hundreds of children with natural or medically induced abnormalities.

- *Certification of Improved Tetanus Toxoid Vaccines* — The laboratories' routinely produced toxoid for use in Massachusetts, now recognized as an international standard, has been purchased by the FDA for such use. In addition, special formulations have been developed that induce long-lasting immunity in persons who may be hard to reach for the standard treatment of multiple doses.

- *Improved Pertussis (Whooping Cough) Vaccine* — Although

this project was still in the experimental stage, results of animal tests were encouraging and suggested that the potency of the vaccine might be preserved while reducing the toxicity.

## DIAGNOSTIC LABORATORIES

### Bacteriology Laboratory

The 175,863 specimens submitted to the Bacteriology Laboratory in fiscal year 1981 represented a 5 percent decrease from 1980, but an approximate 2 to 4 percent increase as compared to 1977 through 1979. The changes in volume of the different kinds of specimens received appear in Table 3.

The Throat Culture Program processed 100,495 specimens, a decrease of 9.5 percent from 1980; however, 19.9 percent of these specimens were positive for Group A streptococci, an increase of 2.1 percent over the positivity rate of the previous year.

The Gonorrhea Control Program reported an increase in the volume of cultures of 4.9 percent; the overall positivity rate was 5.7 percent. The Bacteriology Laboratory notified physicians and clinics that it would no longer accept smears from women after June 30, 1981, because culture was the recom-

mended method for the bacterial diagnosis of gonorrhea in women.

The Enteric Culture Program also reported a decreased volume of specimens — 11 percent less than in fiscal year 1980. Greater staff time was required, however, to culture for campylobacter, a bacterium that is now an increasing cause of food-borne outbreaks. Specimens increased by 74 percent. The number of food-borne outbreaks requiring support from the laboratory was more than double that of last year.

The volume of specimens submitted for fungal identification to the Mycology Laboratory remained approximately the same as that in the previous year. The volume of specimens forwarded to the Centers for Disease Control for histoplasmosis, blastomycosis, and coccidiomycosis has continued to decline, down by 15.2 percent.

### Parasitology Laboratory

The Parasitology Laboratory expanded the availability of tests for the detection of parasitic diseases. More requests were received for the diagnosis of toxoplasmosis than for all the other parasitisms combined — 1,895 as compared to 1,785 specimens in 1980. The second most frequently requested testing was for amebiasis — 287.

**Table 3.**  
**Five-Year Summary of Number and**  
**Kinds of Specimens Examined by the**  
**Bacteriology Laboratory**  
**1977 - 1981.**

| Specimens         | 1977    | 1978    | 1979    | 1980    | 1981    |
|-------------------|---------|---------|---------|---------|---------|
| Enteric Pathogens | 10,178  | 10,025  | 10,270  | 10,006  | 8,904   |
| Gonorrhea*        | 58,707  | 60,330  | 61,803  | 60,693  | 63,216  |
| Mycology          | 425     | 508     | 950**   | 850**   | 907**   |
| Serology          | 90      | 112     | 230     | 257     | 203     |
| Throat Cultures   | 97,899  | 95,214  | 97,682  | 111,035 | 100,495 |
| Food              | 75      | 86      | 38      | 24      | 59      |
| Miscellaneous     | 1,739   | 1,924   | 2,337   | 2,515   | 2,079   |
| Totals            | 169,113 | 168,199 | 173,310 | 185,380 | 175,863 |

\*Includes cultures and smears.

\*\*Includes fungal serology.



Laboratory personnel, in cooperation with the Harvard School of Public Health, sent various specimens to the Centers for Disease Control as part of a tularemia surveillance study. One of a small number of state laboratories, the Parasitology Laboratory has been participating in a pilot surveillance of visceral larva migrans, a disease often due to the presence of larvae of the cat and dog hookworms. By the end of the fiscal year, laboratory staff had begun a study on the therapeutic efficacy of pyrimethamine and quinine for the treatment of babesiosis.

### Serology Laboratory

The Dr. William Hinton Serology Laboratory again participated successfully in the federal Syphilis Serology Proficiency Testing Program conducted by the Venereal Disease Program of the Centers for Disease Control on the standard tests for syphilis. For the first time, the laboratory was inspected by a CDC team of surveyors as part of an application of the Diagnostic Laboratories for certification as an independent laboratory under the federal Medicare Program. Approval was given for both syphilis and rubella antibody testing in October 1980, at which time, responsibility for the rubella program was transferred from the Virology Laboratory to the Serology Laboratory.

Since 1961, when rabies was first found in local bats, the disease has been diagnosed in bats submitted to the laboratory each year. Of the 608 suspicious animals examined in the Rabies Program in fiscal year 1981, 139 were bats, 13 of which were positive. Five of these were associated with biting of humans. The percentage positive frequency of rabies in bats was 9.3 percent in 1981, the highest percent positive rate since 1977.

Probably the most important contribution made by the Rabies Program is the direct, diagnostic emergency service available at all times to determine whether post-

exposure rabies immunization is essential, or whether it is safe to forego such treatment.

### Virology Laboratory

The Virology Laboratory maintained essential primary and referred diagnostic services for viral, rickettsial, and chlamydial diseases. A total of 11,973 specimens were received, processed, and tested in 39,511 separate examinations for the diagnosis of many acute and chronic diseases.

In an important accomplishment over the past year, the Virology Laboratory was able to develop, adapt, and apply more rapid and accurate procedures in the diagnosis of such diseases as Rocky Mountain Spotted Fever and typhus, varicella-zoster, *Mycoplasma pneumoniae*, herpes and cytomegalovirus, eastern equine encephalitis, and lymphocytic choriomeningitis, which is transmitted by rodents and produces severe neurologic disease in infected persons.

Massachusetts has been free of louse-borne typhus (epidemic typhus) for more than three decades. In 1980, the Centers for Disease Control's Virology Division of the Bureau of Laboratories described case histories of eight persons who had serologic reactions that indicated recent infection with *Rickettsia prowazekii*, the etiologic agent of epidemic typhus. One patient was a Massachusetts resident who, like several of the other patients, had had contact with a gray or flying squirrel. The case of the Massachusetts patient was described in detail in the Department's column in the *New England Journal of Medicine*, May 7, 1981.

Encephalitis virus-monitoring was provided through a very active mosquito analysis program — approximately 40,000 mosquitoes were captured and combined into 2,120 pools for testing. Only 30 positive specimens were detected — 25 for Highland J virus (Rocky

Mountain Spotted Fever), and five for eastern equine encephalitis virus (EEE), down from 56 in the previous year. One case of human encephalitis occurred in a patient treated at a Massachusetts hospital. The man had presumably been infected by the virus in his state of residence, New Hampshire, where a focus of infection in horses centered around Kingston, on the Massachusetts border. Eight pheasants from a farm in Dracut, close to the New Hampshire border, were found positive for EEE.

### Laboratory Improvement Program

Although the Laboratory Improvement Program had stopped producing its own proficiency testing specimens, it worked with the Laboratory Regulation Program of the Division of Health Care Quality to evaluate laboratories seeking approval for premarital and prenatal syphilis serology and for premarital rubella serology. In fiscal year 1981, the program sent letters of approval to 208 clinical laboratories.

The Laboratory Improvement Program continued to provide training programs for all the New England States under provisions of the CDC Training Program contract.

## NEWBORN SCREENING

The third major division of the State Laboratory Institute, Newborn Screening, consolidated the Metabolic Disorders Screening Program and the Hypothyroidism Screening Program into a single unit with a central office, Director and Assistant Director. The result has been more efficient use of personnel and greater productivity.

### Hypothyroidism Screening Division

The Hypothyroid Screening Division screened 158,004 blood specimens for congenital hypothyroidism (cretinism) during fiscal year 1981. Of these specimens, 75,344 came from Massachusetts, and



82,660 from four other New England states (Table 4). Of the 6,046 infants with low thyroxine (T4) levels, 30 were identified as hypothyroid. Only two of these infants might have been diagnosed clinically; thus, without the screening program, the diagnosis would have been missed in the other 28 infants. All the hypothyroid infants were started on thyroid replacement before three months of age, after which time damage to the central nervous system becomes irreversible. These infants have been entered into a follow-up study to evaluate the results of early treatment on physical and mental development.

#### Metabolic Disorders Screening Program

Screening of newborn blood specimens for phenylketonuria (PKU) continued to be the mainstay of the program, as it has been since the program's inception in 1962. The program also tested for over 30 other inborn errors of metabolism and continued to test for PKU and three other metabolic disorders for the States of Maine and Rhode Island (Table 5). During fiscal year 1981, eight infants with PKU were identified and placed on a special diet within the first two weeks of life. It was anticipated that they would be spared the mental retardation that would otherwise have occurred.

The program detected two rare metabolic disorders as a result of screening of urine — prolidase deficiency and a vitamin B<sub>12</sub> metabolic defect. Treatment was being sought for the first condition. Treatment with large doses of vitamin B<sub>12</sub> greatly improved the outlook for the second infant.

A major interest of the program continued to be maternal PKU. A number of girls who were found to have PKU by newborn screening in the early 1960s, but who are now clinically normal because of early treatment, are entering their child-bearing years. The Metabolic Disorders Screening Program has been

**Table 4.**  
Newborn Screening Laboratories  
Hypothyroidism Screening Laboratory  
July 1, 1980 - June 30, 1981.

| State         | No. Screened | No. Low T4 | No. Hypothyroid |
|---------------|--------------|------------|-----------------|
| Connecticut   | 40,204       | 1,390      | 6               |
| Maine         | 16,771       | 791        | 3               |
| Massachusetts | 75,344       | 2,469      | 17              |
| New Hampshire | 13,142       | 712        | 2               |
| Rhode Island  | 12,543       | 684        | 2               |
| Totals        | 158,004      | 6,046      | 30              |

**Table 5.**  
Newborn Screening Laboratories  
Metabolic Disorders Laboratory  
July 1, 1980 - June 30, 1981.

|                                 | Number  | Percent of Live Births (Mass.) |
|---------------------------------|---------|--------------------------------|
| A. Routine Specimens            |         |                                |
| Umbilical Cord Blood            | 73,039  | 97                             |
| Newborn Blood (Massachusetts)   | 75,344  | > 99                           |
| Newborn Blood (Maine)           | 16,771  |                                |
| Newborn Blood (Rhode Island)    | 12,543  |                                |
| Newborn Urine                   | 57,724  | 77                             |
|                                 | 235,421 |                                |
| B. Other Specimens*             | 2,954   |                                |
| Total Number of Specimens       | 238,375 |                                |
| Total Number of Tests Performed | 606,618 |                                |

\*Secondary specimens obtained for specific purposes such as confirming a disease in an infant (follow-up newborn blood or repeat urine specimen) or for testing immediate relatives of an infant with a known or suspected disease to ascertain additional cases within a family.

studying whether the children of these mothers will be damaged because of the mothers' PKU. Whether this damage can be prevented by dietary treatment during pregnancy has as yet remained unresolved.

## HOSPITALS

The role of the seven public health hospitals in the overall delivery of health care in the Commonwealth remained a matter for discussion during fiscal year 1981. Although many services once provided only by these hospitals have been absorbed by the private sector, the hospitals, in general, continued to provide a broad range of clinical services to meet the needs of patients with long-term but remedial disabilities. Despite budgetary restrictions and the general short-

age of nurses, the Department of Public Health's hospitals maintained quality care and accreditation. Three major developments occurred during the year:

- The Department made great progress in plans to transfer Pondville Hospital to the private sector. The Department had solicited proposals from institutions interested in purchasing Pondville, and entered into negotiations with Norwood Hospital. By the end of the fiscal year, negotiations and a sales agreement were nearing completion.
- The Lemuel Shattuck Hospital received a Determination of Need approval to open a 75-bed psychiatric unit to treat patients now cared for at Boston State Hospital. The project will allow for more efficient use of the Shattuck, as well as further the goal of consolidation of underutilized state facilities.

- Western Massachusetts Hospital developed a special coma unit, a project representative of the innovative programs being attempted by the Department's hospitals. The coma unit received national acclaim and requests for admission from all over the United States.

The services and programs of the seven public health hospitals are briefly summarized.

- **Lakeville Hospital** — A 130-bed chronic disease rehabilitation hospital located in Middleboro in the southeastern region of the state, Lakeville Hospital has an inpatient census divided equally between pediatric and adult patients. Although the average inpatient census (93.4 versus 103.2 in 1980) and the number of patient days (34,094 versus 37,694 in 1980) decreased in fiscal year 1981, the number of admissions increased by 7.5 percent, an indication of a shorter average length of stay and a continuing shift toward true rehabilitation. Outpatient visits to the hospital's many specialty clinics continued to increase. Despite its uncertain future, the 10-station renal dialysis unit increased the number of treatments from 6,044 in 1980 to 6,708 in 1981. The Department has solicited other vendors to treat dialysis patients in the southeastern area to permit the Lakeville Hospital unit to close. Hospital staff continued to provide educational services through training affiliations and an accredited Continuing Medical Education Program. In addition, several weight-loss, stop-smoking, and cardiopulmonary resuscitation clinics were held.

- **Lemuel Shattuck Hospital** — Located in the Jamaica Plain section of Boston, the Lemuel Shattuck Hospital provides inpatient care to patients suffering acute episodes of chronic illness, and outpatient follow-up. Medical and surgical services are provided to other state agencies, including the Department of Mental Health and the Department of Correction. The

75-bed medical geriatric unit serves former patients from the Boston State Hospital. The 15-bed medical correction unit operated at over 100 percent occupancy. Construction work proceeded on the Department of Correction's outpatient holding area to permit an enlarged capacity for treatment of these patients.

The Outpatient Department, which operated over 25 specialty clinics, opened new ones in dentistry, chronic care, pain and stress, and psychiatry. The pain and stress clinic began treating patients with chronic pain, unrelieved by traditional treatment, with a comprehensive range of treatment modalities. The expanded psychiatry clinic provided to elderly in nursing homes or the community a broad range of services that included memory training, testing and supportive psychotherapy. The hospital offered a special program of training for 36 graduate student interns in psychology, counseling, social service, and recreational and music therapy.

A major four-year grant from the Robert Wood Johnson Foundation allowed the hospital to organize

an innovative chronic-care program for nonhospitalized patients that developed a staff of nurse practitioners skilled in the management of patients with chronic diseases. After the completion of the first year, chronic disease nurse practitioners were managing the care of over 100 patients. New patients were being added at the rate of 15 to 20 a month.

The 11-station renal dialysis unit decreased the number of treatments by 6 percent — from 8,224 in 1980 to 7,727 in 1981.

- **Massachusetts Hospital School** — The Massachusetts Hospital School, located in Canton, is a unique institution that provides medical, educational, and restorative services to physically handicapped but intellectually able children from age three to 21. The trend of placing and keeping handicapped children with such disabilities as cerebral palsy, muscular dystrophy, and spina bifida in the community has resulted in a core population with more severe disabilities at the Hospital School.

The Hospital School continued to provide a wide range of clinical services — orthopedics, cardiology,







cerebral palsy, Milwaukee Brace, myelodysplasia — to both inpatients and outpatients from the surrounding communities. When medically indicated, surgery, principally orthopedic, was performed. During fiscal year 1981, the Hospital School strengthened its respiratory and pediatric services, a move that reflected the increasing severity of the patients' needs.

Programs to develop the skills necessary for independent living were reinforced during the year. The Student Independent Living Experience (SILE), operated by the Hospital School's nonprofit partner, the Medical and Educational Fund for the Handicapped, gave students an opportunity to experience independent living. The Gates Program, operated by Hospital School personnel, worked closely with the SILE Program.

In the spring of 1981, the Governor officiated at groundbreaking ceremonies for a new power plant and a gymnasium/pool recreational complex. The projects were slated for completion in two years. Progress was also being made on housing for the severely disabled being developed by the Canton Housing Authority, the Medical and Educational Fund for the Handicapped, and the Massachusetts Hospital School with funding granted under Chapter 689 of the Massachusetts General Laws.

- **Pondville Hospital** — The first state-operated facility for the treatment of cancer in the United States, Pondville Hospital, a 104-bed institution in Walpole, has served the public and the Commonwealth with distinction for over 60 years. Despite the problems created by a reduced budget and the uncertainties of the pending transfer of ownership to the private sector, the hospital staff maintained quality patient care. Multimodality treatment of cancer — surgery, radiation, and chemotherapy — continued.

Researchers in the Ira T. Nathanson Research Laboratories resumed investigations of certain selective antineoplastic effects of lysolecithin, and initiated a new line of research to verify the antineoplastic activity of reduced glutathione. By the end of the year, publication of the data was in preparation.

Community education programs included seven seminars in smoking, eight seminars in breast self-examination with 100 participants, and eight seminars in cancer prevention and early detection with 86 participants. Hospital staff organized a seminar on cancer nursing that was presented to 19 nursing schools and attended by over 1,000 students and instructors. A four-part, eight-hour seminar on the chemotherapeutic management of cancer was organized for community nurses.

- **Rutland Heights Hospital** — Located in the Town of Rutland, the Rutland Heights Hospital is a multipurpose facility that serves an adult population in the central Massachusetts region. During fiscal year 1981, the hospital operated 130 beds and provided outpatient diagnostic, rehabilitation and day-care services.

As part of its program of prevention, the hospital maintained a comprehensive health program to prevent, delay, or reduce the need for institutional care, and gave patients a directory of health-related information and services in the communities. The Adult Day Care Program served a population within a 10-

mile radius of the hospital on an outpatient basis. The program provided, under professional supervision, an alternative setting for adults at risk of being institutionalized, as well as physical fitness, social, and educational activities.

The rehabilitation program made available an integrated system of medical, nursing, therapeutic, and support services through a team approach. The alcoholism treatment program, centered in a three-bed unit, offered rehabilitation through social services, individual, group, and vocational counseling to alcoholics who voluntarily requested treatment.

- **Tewksbury Hospital** — Tewksbury Hospital in the northeastern region of the state, with a bed capacity of 820, is the largest chronic disease, rehabilitation hospital in the state. It also operates a 225-bed program for homeless men, who are chronic alcoholics. One hundred and twenty medical beds were assigned to the care of former patients from the Danvers State Hospital. These are geriatric patients with both physical and psychiatric problems.

During fiscal year 1981, the hospital maintained an average occupancy rate of 93 percent. The demand for admissions to Tewksbury Hospital was so overwhelming that the hospital was forced to stop issuing admission forms in September 1980. Admission forms were reactivated in January 1981.

The case load in the occupational therapy department increased to 185. A rehabilitation team of occupational, recreational, and physical therapists worked to enable all patients to achieve their maximum level of health and independence and to return to a productive life in the community.

- **Western Massachusetts Hospital** — Located in Westfield in Hampden County, the Western Massachusetts Hospital offers long-term care of chronically ill adults, rehabilitation and alcoholism programs, and medical and



**Table 6.**  
**Public Health Hospitals**  
**Annual Census Summary — July 1, 1980 - June 30, 1981.**

| Hospitals             | Admissions   | Discharges   | Days           | Stay     | Census   | Visits        |
|-----------------------|--------------|--------------|----------------|----------|----------|---------------|
| Lakeville*            | 347          | 341          | 34,094         | 98.25    | 93.41    | 8,779*        |
| Lemuel Shattuck*      |              |              |                |          |          |               |
| Main                  | 1,221        | 1,246        | 28,652         | 23.47    | 78.5     | 25,062*       |
| Medical Geriatric     | 57           | 53           | 24,164         | 423.93   | 66.2     |               |
| Mass. Hospital School | 109          | 115          | 26,687         | 244.83   | 114.79** | 1,676         |
| Pondville             | 927          | 780          | 12,811         | 13.82    | 35.10    | 16,450        |
| Rutland Heights       | 334          | 316          | 41,076         | 122.98   | 112.54   | 950           |
| Tewksbury             |              |              |                |          |          |               |
| Main                  | 235          | 43           | 278,938        | 1,186.99 | 764.21   | —             |
| Homeless Men          | 211          | 192          | 54,030         | 256.07   | 148.03   | —             |
| Western Mass.         | 564          | 499          | 30,738         | 54.50    | 84.21    | 8,487         |
| <b>TOTALS</b>         | <b>4,005</b> | <b>3,585</b> | <b>531,190</b> |          |          | <b>61,404</b> |

\*The dialysis units at Lakeville and Shattuck Hospitals provided 6,708 and 7,727 treatments (including home dialysis), respectively.

\*\*Average daily census at the Massachusetts Hospital School has been adjusted to reflect enrollment days.

surgical care of multiply handicapped children. The medical unit continued to provide care to patients with chronic medical conditions that require a higher level of care than what is available at a nursing home. In addition, it provided respite care for both children and adults, and day-care services for adults with physical disabilities.

The hospital experienced a modest increase in patient admissions, a 10 percent increase in patient days, and a 11 percent increase in occupancy rates, as compared to the previous fiscal year. Although all patient-care programs shared in the overall increases, the greatest increase was in programs serving chronically and terminally ill patients. This factor was due in part to the development of the special coma unit. At the same time, the hospital organized a support group for the families of patients in the unit, and a similar group for families of terminally ill patients.

The seven hospitals admitted 4,005 patients during the fiscal year 1981, a decrease of 195 (4.6 percent) from 1980. The average length of stay varied from 13.82 days at Pondville to 1,186.99 days at Tewksbury. The number of outpatient visits — 61,404 — represented a decrease of 4,617 from 1980 (Table 6).

As part of the Department's total public health effort, the seven hospitals continued to expand training of physicians and paramedical personnel. Lemuel Shattuck, Pondville, Tewksbury and Western Massachusetts Hospitals graduated about 150 practical nurses from their accredited schools of practical nursing.

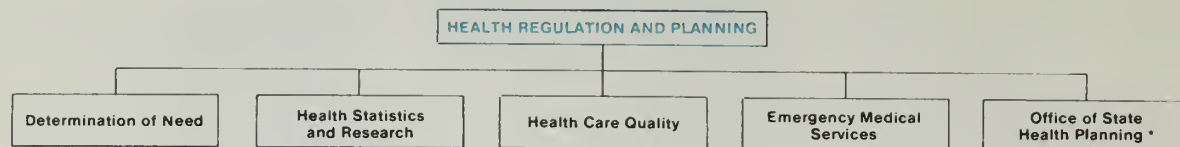
## DIVISION OF ALCOHOLISM

The Division of Alcoholism strengthened activities for building its network of prevention resources, both regionally and statewide. During fiscal year 1981, the Division continued to fund eight community-based, regional prevention centers. The Division also funded five model prevention programs designed for school systems, youth agencies, churches, college campuses, and parents of adolescents, as well as a model for the recruitment, training, and use of volunteers in performing primary prevention and educational activities. The Division completed two media campaigns to promote public awareness of, and support for, primary prevention efforts.

In the area of secondary prevention, the Division continued to fund seven programs that seek to

identify and treat youths with a drinking problem. The projects provided education, intervention counseling, advocacy and alternatives to drinking. The Division maintained its commitment to the state's employee assistance program as a means of early identification of potential alcoholics. In the past year, more than 150 state employees received clinical services. The state's driver alcohol-education and treatment program offered necessary services to the growing number of persons arrested for drunken driving. Over 17,000 were referred to these programs in fiscal year 1981. Several innovative programs were implemented during the year — an outpatient program specifically for an elderly population, the Community Training and Resource Center for special populations, and the Hispanic Alcoholism Planning Project.

The Division continued to fund the statewide system of 21 detoxification centers; a 22nd center, Beacon Detoxification Center, in Franklin County, was completed. The Division also maintained its support of 48 halfway houses and 33 outpatient programs.



\* Transferred to Executive Office of Human Services in fiscal year 1982.

## HEALTH REGULATION AND PLANNING

Through its program of standard setting, inspection, licensure, and review, the Department works to ensure the people of Massachusetts safe health care. Under the provisions of the Determination of Need Act, the Department also has the responsibility for preventing unnecessary expansion of health care facilities.

## HEALTH CARE QUALITY

The Division of Health Care Quality is mandated by state and federal statutes to license and certify health care facilities and services in the Commonwealth. In fiscal year 1981, the Division licensed approximately 800 facilities, including hospitals, clinics, nursing homes, rest homes, ambulance services and blood banks. Approximately 1,000 facilities and services were certified for federal programs. The Division also reviewed, on behalf of the Department of Welfare, about 34,000 Medicaid patients in long-term care facilities, state schools for the mentally retarded, and psychiatric hospitals for adequacy and quality of care, and for appropriate placement.

The Division reviewed and approved the design, planning, and construction of 620 projects for health care facilities involving new construction, renovations, alterations and acquisition of new equipment to ensure compliance with certain Life Safety Code, building,

and Determination of Need requirements. Complaints concerning patient care, staffing, physical environment, and other aspects of delivery of services affecting the safety and well-being of patients in long-term care facilities were investigated. Seventy-five of the 325 complaints were found to be either partially or fully justified and were resolved through consultation or formal enforcement action.

The Division's responsibility for investigating complaints was broadened by a new state law requiring facility staff to report incidents of abuse, mistreatment, and neglect of patients and residents of long-term care facilities. The Division investigated 34 complaints of patient abuse. Twelve were not substantiated on investigation; 16 were either partially or fully justified; and six were referred to the Office of the Attorney General for review and investigation. Five of the 16 substantiated cases were referred to the Office of the Attorney General for follow-up, and 11 were resolved through consultation or formal enforcement action of the Department.

To protect patients and improve patient care, the Division initiated revocation actions against six long-term care facilities and one ambulance service, and initiated decertification actions against three nursing homes and three clinical laboratories. Seven substandard long-term care facilities with severe deficiencies in patient care and fire safety were closed. Division staff provided active assistance in the relocation of patients from these substandard nursing and rest homes to suitable alternative facilities. To prepare for future patient reloca-

tions, the Division began development of a patient relocation plan to be put into operation only when other measures prove fruitless.

During fiscal year 1981, the Division continued its efforts to reduce excessive regulation and eliminate duplicative surveys of facilities and services. Division staff prepared regulations to implement an agreement between the Department of Public Health and the Joint Commission on Accreditation of Hospitals (JCAH) to offer "deemed" status by the Department to facilities accredited by the JCAH. Accepting JCAH accreditation as the basic qualifier for state licensure will permit the Department to reduce the time surveyors spend in routine surveys.

A major revision of the regulations governing blood banks was promulgated in March 1981 to permit accepting accreditation by the American Association of Blood Banks (AABB) in lieu of a state survey for licensure. The blood bank regulations were based on the AABB's standards and on the regulations of Medicare and the federal Food and Drug Administration.

A third set of regulations — governing licensure of clinical laboratories — was promulgated in May 1981. These regulations, which reduce state inspections, provide for acceptance of accreditation, certification or licensure by a program deemed equivalent for state licensure by the Department.

Rate incentive regulations allowing for reward of facilities for outstanding compliance were debated at a public hearing in August 1980 and promulgated in April 1981. A Rate Incentive Task Force has been



meeting to develop an improved system to measure the quality of nursing homes. The Nursing Home Disability Regulations, which were developed to allow an increase in reimbursements for facilities caring for patients with severe disabilities, were promulgated in March 1981.

## DETERMINATION OF NEED

Under the provisions of the Determination of Need (DON) Law (Chapter 776 of the Acts of 1972), the Department is responsible for analyzing the need for, and cost-effective allocation of, health care facilities in the state. The objectives of the legislation were: to control health costs by eliminating duplication of expensive facilities, services, and technologies; to reduce costs of certain projects with weak or faulty planning; to encourage the regionalization of health care services; to encourage equitable geographic and socioeconomic access to health care; to encourage participation of all interested parties in the review of proposals; and to improve internal hospital planning.

The DON Program has made progress toward achieving these objectives. Some of the specific accomplishments of the program have been:

- Reduction of hospital-bed capacity. Between 1976 and 1979, the Commonwealth recorded a net reduction of 600 acute-care beds.
- Participation with the Rate Setting Commission in the reduction of the annual growth of acute-care hospital expenditures from 14.2 percent in 1976 to the current 9 to 11 percent range.
- Reduction of DON proposed costs by an average 25 percent, i.e., the difference between project costs initially proposed and the project costs approved by the Department.

- Encouragement of the development of psychiatric services in community hospitals to facilitate the consolidation of State Mental Hospitals.

- Aid to the growth of services, such as, renal dialysis, acute psychiatric, neonatal care, CT scanning, and alcoholism, in underserved areas of the state while restraining their growth in oversupplied areas (usually Boston).

During fiscal year 1981, the Department began a careful evaluation of the role of the DON Program in the decade ahead. Convinced that DON has been, and will continue to be, an important cost-containment measure, the Department has recommended to the Legislature the reduction of the scope of the program by eliminating certain projects that have marginal effect on the cost and quality of care, specifically, the original licensing of clinics and halfway houses and changes in hospital ownership. At the same

time, the Department has taken steps to review smaller applications more expeditiously. Under an Administrative Review Procedure, decisions on these smaller applications have been delegated to the Commissioner, thus reducing time and effort of staff, the Public Health Council, and applicants.

## EMERGENCY MEDICAL SERVICES

The Office of Emergency Medical Services (OEMS), an agency of the Department of Public Health since 1973, continued to work with many organizations and agencies on a regional and statewide basis to improve the delivery of emergency medical care. OEMS, working with public officials, hospitals, physicians, the Massachusetts Hospital Association, and local and regional councils, coordinated training programs, developed treatment protocols, and coordinated the activities of health care facilities. Each of the





six Massachusetts regions now has a functioning regional council. Four of the regions received advanced life support implementation grants from the United States Department of Health and Human Services that totaled \$1,025,000 in fiscal year 1981.

During the past year, OEMS concentrated on improved care for groups of critically ill patients. The statewide Burn Committee brought together experts in burn care and representatives from regional and community hospitals to investigate the organization of burn care in the Commonwealth. Members of the Statewide Spinal Cord Injury Committee worked to identify comprehensive and intermediate level capabilities for the care of spinal-cord injured patients.

The Office of Emergency Medical Services also staffed a Statewide Helicopter Task Force that made recommendations for the Department's policy on air ambulance service in Massachusetts. The Statewide Trauma Study, funded by a grant from the Governor's Highway Safety Bureau, collected data from 49 hospitals. Results of the study will be made available by the end of 1981.

Programs to upgrade resources and to broaden local and state emergency medical services networks functioned throughout the year:

- OEMS provided administrative coordination and approval of all basic emergency medical technician (EMT) courses in the state. In calendar year 1980, 5,046 ambulance attendants were trained at the basic level, 2,509 were certified as EMTs, and 237 were trained to provide advanced life support.
- OMES put into operation a state testing and registration system for the processing and dissemination of test results, continuing education status, and measurement of instructor/coordinator performance.

The system also provided computerized listings of approved continuing education courses.

- Training of emergency room nurses was maintained. During the year, 197 nurses participated in the Critical Care Emergency Department Nurse Program. OMES also began a course in triage procedures for such nurses.

## HEALTH PLANNING

Fiscal year 1981 marked the fifth year during which the Department of Public Health functioned as the federally designated State Health Planning and Development Agency (SHPDA). The Office of State Health Planning (OSHP), the unit within the Department that carried out the SHPDA's responsibilities, continued to distribute the State Health Plan. To facilitate the implementation of the State Health Plan, OSHP prepared and distributed the State Health Plan Policy Summary, which highlighted the key issues, conclusions, data and policy recommendations. Other accomplishments of OSHP during the fiscal year were as follows:

- Published the document "Cancer Control: A State Health Plan for Massachusetts."
- Published a policy evaluation of treatment for End State Renal Disease, "Using A Dialysis Need-Projection Model for Health Planning in Massachusetts."
- Released a policy analysis of Health Maintenance Organizations, "Progress Report and Development Strategy for Massachusetts."
- Prepared an issue paper, "Chronic Disease Hospitals."
- Released a data summary of home health agencies, "Analysis of Medicaid and Other Home Health Agency and Patient and Provider Data in Massachusetts."
- Issued a policy statement and report entitled, "Development and Implementation of a Helicopter Aeromedical System for the Commonwealth."
- Submitted to the Executive Office of Human Services a proposal outlining a strategy for the reform of the Mental Health system in Massachusetts.



## HEALTH STATISTICS AND RESEARCH

The Division of Health Statistics and Research continued to carry out its core functions of collection and dissemination of data on vital events, licensed health professionals, and health facilities in the Commonwealth. The Division fulfilled its broader responsibility to provide coordination of data among agencies that collect data, to provide statistical standards, population estimates, and technical assistance to users of data, and to serve as a clearinghouse for information on public health research.

In fiscal year 1981, the Division did the planning and initial staffing of the Massachusetts Cancer Registry, a statewide cancer incidence

registry to be maintained by the Department of Public Health, in accordance with Chapter 111, Section 111B, Massachusetts General Laws. The Division's research staff cooperated with several towns and local boards of health in conducting cancer mortality studies.

During the past year, the Division recorded the following additional accomplishments:

- The Division participated in a major investigation of the incidence of childhood leukemia in Woburn, in conjunction with staff from the Department's Environmental Health Section, and researchers from the Centers for Disease Control.

- The Registry of Vital Records and Statistics processed and analyzed data for approximately 250,000 births, deaths, marriages, divorces, and abortions.

- The Health Resources Unit processed and analyzed data from over 100,000 health professionals and from approximately 2,000 health facilities, and aided health care facilities in preparing material for Determination of Need and long-range planning activities.

- The Research Unit provided technical assistance to investigators both within and outside the Department, and participated in the Technical Review Committee of the Massachusetts Health Data Consortium.

- The Division published Part I of *Massachusetts Standardized Mortality Ratios: 1969-1978*, a 10-year study of mortality in each of the state's 351 cities and towns, and provided technical consultation to local boards of health in interpreting the data for their municipalities (Fig. 5).

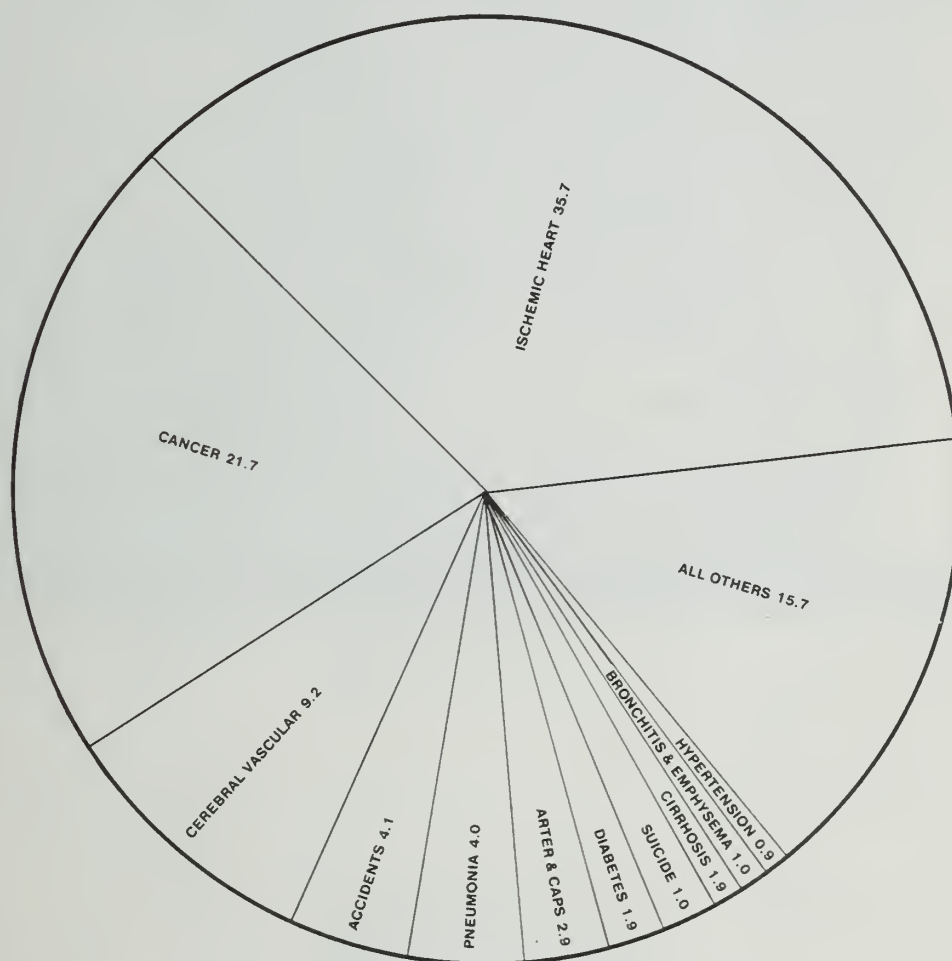
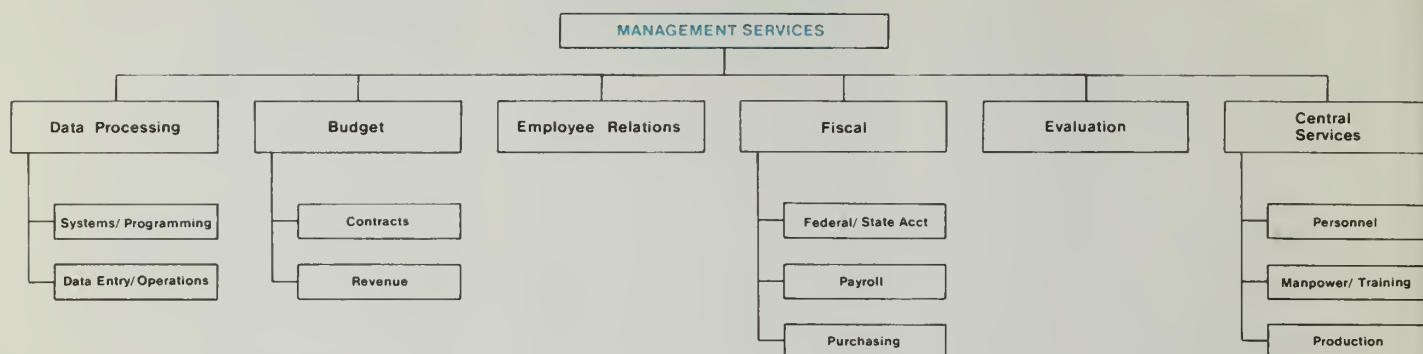


Figure 5. Percentage Distribution of Massachusetts Deaths by Major Causes, 1974-1978.

The proportion of Massachusetts deaths due to specific causes represents those for both sexes and all ages combined. The proportions for this period are similar to those for the entire United States.



## MANAGEMENT SERVICES

Management Services consolidates the activities of the Budget Office, the Division of Data Processing, the Fiscal Office, the Division of Program Evaluation, the Office of Employee Relations, and the Division of Central Services. These Divisions provide centralized administrative services to the Department.

### DATA PROCESSING

The Division of Data Processing provides computer resources to the Department of Public Health through a time-sharing and remote-job entry contract with a computer service bureau. The Division also provides advice on data processing to the Divisions of the Department, and reviews all Division requests for data-processing services, equipment, and systems. Major projects in fiscal year 1981 included:

- The transfer of the automated WIC system from an outside computer service bureau to a Commonwealth Computer Center, which resulted in an annual savings of \$100,000 for the Division of Family Health Services.
- A thorough review of the Division of Alcoholism's Management Information System.

- A continued major role in the development of Administration and Finance's integrated Personal/ Payroll Management Information System, for which the Department will be the initial test site.

- Feasibility studies for an automated laboratory management and fee-for-service program for the Division of Biologic Laboratories, State Laboratory Institute.

- Completion of a competitive procurement for word processing equipment for the Divisions of Family Health Services, Radiation Control, Health Planning, and for the Bureau of Management Services.

### BUDGET OFFICE

The Budget Office, which supervises the preparation of annual budget requests and spending plans for the Department's 24 state appropriation accounts, oversees the work of its Contracts and Revenue Units. The Revenue Unit implemented new fee structures to increase revenue to the Commonwealth.

### EMPLOYEE RELATIONS

The Office of Employee Relations coordinated the lay-offs of 10 employees and the reassignment of 27 employees, the result of federal

cutbacks in fiscal year 1981. It spent the latter part of the fiscal year preparing for projected layoffs in fiscal year 1982.

### FISCAL OFFICE

In addition to providing accounting services for \$130 million in state and federal funds, the Fiscal Office oversees the operations of the Payroll and Purchasing Units. During fiscal year 1981, the Fiscal Office met its goal of reimbursing purchase-service providers on the timely payment system within seven working days. It processed 32,000 invoices, including payments for 255 consultant contracts and 95 purchase-of-service contracts.

### PROGRAM EVALUATION

The Division of Program Evaluation completed its evaluation of the outcome of the Drunken Driving — Phase II Program. The findings have helped the Division of Alcoholism to identify the strengths and weaknesses of the program. The evaluation stimulated broad discussion within the Department on how to use Phase II money more effectively, either on a different method of treatment or on a less intractable population. As



a direct result of the evaluation, the Division of Alcoholism put out a request for proposal (RFP) for dramatically different approaches to helping this population, with some of the current resources to be redirected to these innovative designs.

## DIVISION OF CENTRAL SERVICES

Central Services consists of three units that provide Department-wide services: Personnel, Manpower/Training, and Production. Major accomplishments of the Division included:

- Completion of a Department-

wide analysis of employment of minorities in Public Health positions. Results were converted into operational goals for Public Health Divisions.

- Incorporation of newly acquired planning and training skills in Motivational Dynamics to design and hold the Department's first inhouse supervisory training course.



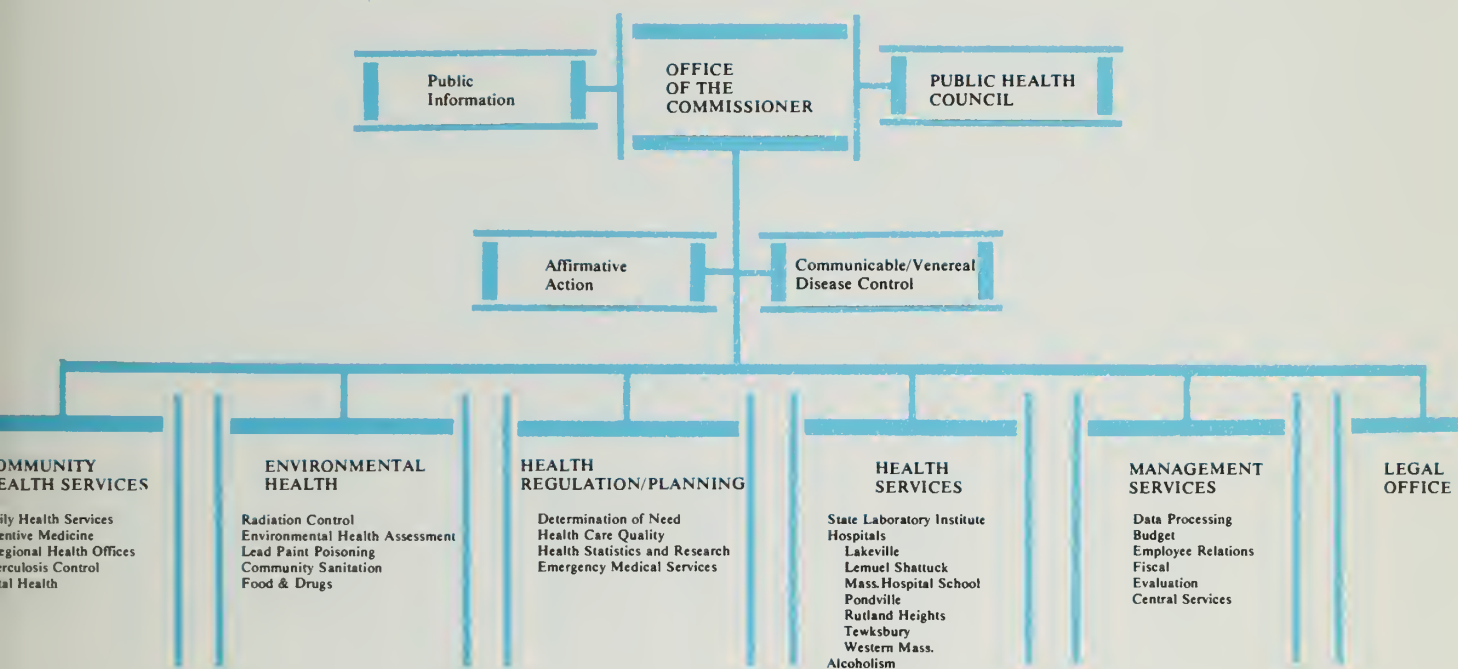
**EXPENDITURE REPORT  
DEPARTMENT OF PUBLIC HEALTH  
JULY 1, 1980 - JUNE 30, 1981**

|   | STATE                | FEDERAL             | TOTAL                |
|---|----------------------|---------------------|----------------------|
| <b>COMMISSIONER'S OFFICE</b>                      | \$ 475,611           | \$ 112,807          | \$ 588,418           |
| <b>MANAGEMENT SERVICES</b>                        | 2,551,486            | 397,693             | 2,949,179            |
| <b>LEGAL OFFICE</b>                               | 158,409              | 67,417              | 225,826              |
| Governor's Task Force                             | 46,000               | —                   | 46,000               |
| <b>Sub Total</b>                                  | 3,231,506            | 577,917             | 3,809,423            |
| <br><b>COMMUNICABLE AND<br/>VENEREAL DISEASES</b> | <br>2,437,945        | <br>689,659         | <br>3,127,604        |
| <b>Sub Total</b>                                  | 2,437,945            | 689,659             | 3,127,604            |
| <br><b>COMMUNITY HEALTH SERVICES</b>              |                      |                     |                      |
| Family Health Services                            | 5,932,828            | 22,173,167          | 28,105,995           |
| Preventive Medicine                               | 507,808              | 676,433             | 1,184,241            |
| Tuberculosis Control                              | 2,934,479            | 24,100              | 2,958,579            |
| Local Health                                      | 446,898              | 895,936             | 1,342,834            |
| Dental Health                                     | 53,755               | 169,074             | 222,829              |
| <b>Sub Total</b>                                  | 9,875,768            | 23,938,710          | 33,814,478           |
| <br><b>ENVIRONMENTAL HEALTH</b>                   |                      |                     |                      |
| Lead Paint Poisoning                              | 595,270              | 1,503               | 596,773              |
| Radiation Control                                 | 278,074              | 18,315              | 296,389              |
| Consumer Products                                 | 1,673,746            | 8,513               | 1,682,259            |
| <b>Sub Total</b>                                  | 2,547,090            | 28,331              | 2,575,421            |
| <br><b>HEALTH PLANNING &amp; REGULATION</b>       |                      |                     |                      |
| Health Planning                                   | 303,585              | 670,821             | 974,406              |
| Health Statistics                                 | 567,956              | 143,741             | 711,697              |
| Determination of Need                             | 418,998              | 12,922              | 431,920              |
| Emergency Medical Services                        | 266,479              | —                   | 266,479              |
| Health Care Quality                               | 3,350,113            | 523,527             | 3,873,640            |
| <b>Sub Total</b>                                  | 4,907,131            | 1,351,011           | 6,258,142            |
| <br><b>HEALTH SERVICES</b>                        |                      |                     |                      |
| Alcoholism Program                                | 16,258,756           | 4,493,311           | 20,752,067           |
| State Laboratory Institute                        | 4,149,327            | 341,038             | 4,490,365            |
| Hospitals   |                      |                     |                      |
| Lakeville Hospital                                | 7,032,862            | —                   | 7,032,862            |
| Lemuel Shattuck Hospital                          | 15,388,253           | —                   | 15,388,253           |
| Mass. Hospital School                             | 5,936,774            | —                   | 5,936,774            |
| Pondville Hospital                                | 6,179,084            | —                   | 6,179,084            |
| Rutland Heights Hospital                          | 5,431,354            | —                   | 5,431,354            |
| Tewksbury Hospital                                | 15,621,057           | —                   | 15,621,057           |
| Western Mass. Hospital                            | 5,039,467            | —                   | 5,039,467            |
| <b>Sub Total</b>                                  | 81,036,934           | 4,834,349           | 85,871,283           |
| <b>TOTAL</b>                                      | <b>\$104,036,374</b> | <b>\$31,419,977</b> | <b>\$135,456,351</b> |



# EXECUTIVE OFFICE OF HUMAN SERVICES

## DEPARTMENT OF PUBLIC HEALTH



THE COMMONWEALTH OF MASSACHUSETTS  
Edward J. King, Governor

EXECUTIVE OFFICE OF HUMAN SERVICES  
William T. Hogan, Jr., Secretary

DEPARTMENT OF PUBLIC HEALTH  
Alfred L. Frechette, M.D., Commissioner



## ANNUAL REPORT, 1980-1981

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# MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

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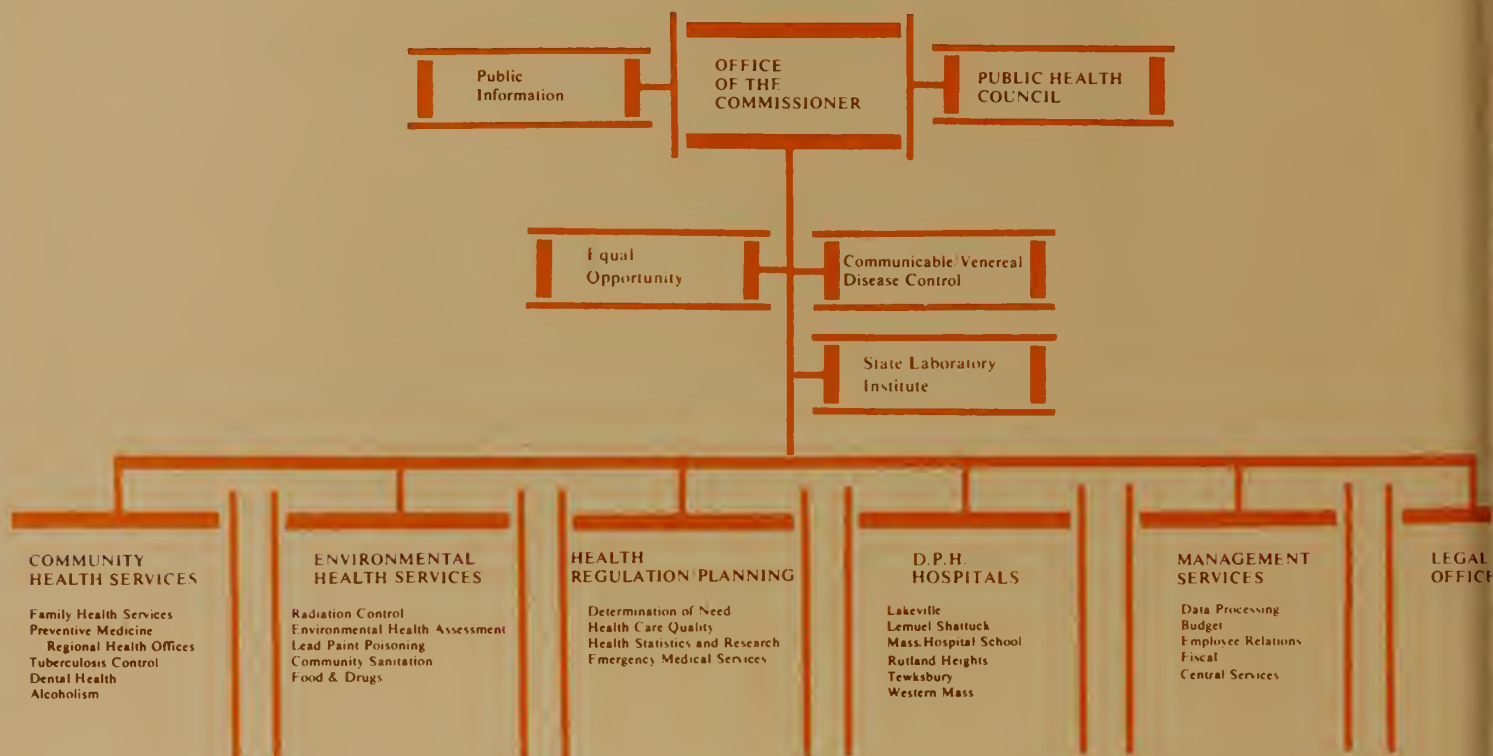
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## ANNUAL REPORT

1981-1982

# EXECUTIVE OFFICE OF HUMAN SERVICES

## MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH



June 30, 1982

Alfred L. Frechette, M.D., M.P.H.  
*Commissioner of Public Health*  
*Chairman, Public Health Council*

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## FROM THE OFFICE OF THE COMMISSIONER

During the fiscal year that ended on June 30, 1982, the Department of Public Health experienced massive cuts in both state and federal funds, which necessitated a 12 percent reduction in personnel. The tight budgetary situation impelled the Department to target its reduced funds to programs in the prevention of avoidable illness and death, in providing special public health services to sections of the population in need, such as handicapped children and alcoholics, and in setting standards for other providers.

The year was marked by the transition from categorical to block grant funding of a number of public health programs. The change to block grants increased the responsibility of the Department for defining, planning, implementing and monitoring service areas previously under the close supervision of the federal government. The diminution in federal oversight and control also increased public demand for accountability and for the compilation of data at the state level.

The Department worked to keep indispensable programs and to divest itself of services and facilities that could be operated more efficiently by private providers. The sale of the Pondville Hospital in January 1982 allowed the Department to give greater attention to its six remaining public health hospitals, which have traditionally provided services not available in the private sector. In the past year, all the hospitals continued their broad range of largely chronic and rehabilitative services and instituted several innovative programs.

Lakeville Hospital, with St. Luke's Hospital in Middleborough and Morton Hospital in Taunton, formed a hospital consortium to explore how the three institutions can jointly meet the health needs of the southeastern region. The Lemuel Shattuck Hospital, which has been redefining its responsibility, completed plans to open a psychiatric unit to absorb severely ill patients from

the Bay Cove Mental Health Center, operated by the Department of Mental Health. The Massachusetts Hospital School was able to expand its services to physically handicapped children by building a swimming pool/gymnasium complex. The facility, and other programs, may well serve as a magnet for handicapped children from across the state. Tewksbury Hospital continued to provide efficient, high quality long-term care for elderly persons on a par with, or better than, that in the private nursing home sector. Western Massachusetts Hospital has made an outstanding contribution through its Coma Unit, which has received national notice.

Through the Division of Preventive Medicine, the Department has strengthened its commitment to disease prevention and health promotion. The Division carried out its first statewide health interview survey, which profiled the health-related habits of adult Massachusetts residents, 16 years of age or older. By determining the prevalence of risk factors for serious illness, the Department is in a better position to determine where to allocate its resources for primary disease prevention. Another important risk-reduction program was a pilot fitness project for the Fall River Fire Department, funded by the Department. As a result of the initial successes of the program, the Department sponsored a series of workshops throughout the state to encourage fire departments to develop fitness programs for their employees.

Mindful of its responsibility to respond to the needs of local boards of health, the Department prepared a *Guidebook for Massachusetts Boards of Health*, a comprehensive, practical reference of the responsibilities of local boards of health in delivering public health services. The *Guide* was the result of a lengthy collaborative effort of many health professionals both within and outside the Department.

In January 1982, the Department's statewide Cancer Registry began operations. Hospitals in Massachusetts are now required to report all newly diagnosed cases of cancer to the Cancer Registry within six months of the date of diagnosis. With the data gathered and statistically sum-

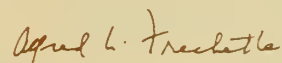
marized by the Registry, the Department will be able to identify areas of the state where incidence seems to be high.

As part of a two-year effort to reduce ineffective and unnecessary regulation, the Department extended its "survey-by-exception" program to all nursing homes in the state. Under the program, the Department reduced the intensity of inspections of nursing homes that have consistently provided good quality of care.

Using new approaches to the growing problem of alcoholism, the Department's Division of Alcoholism launched a statewide public education campaign on television and radio on the subject of women and alcohol during the month of February. To help prevent teenagers from getting into trouble with alcohol during the prom season, the Division, in cooperation with other organizations concerned about the problem, carried out a television and radio campaign with the theme, "Friends Don't Let Friends Drive Drunk."

In the face of the buildup of nuclear weapons throughout the world, the Department, following the basic concept of public health — the prevention of the occurrence of disease and injury — took the position that prevention is essential to wipe out the "last epidemic of nuclear war." The Department embarked on a program of education to inform the people of the Commonwealth of the unimagineable medical, social, and economic consequences of a nuclear war. The first step has been the publication and wide distribution of the Department's brochure, "Nuclear Weapons: A Public Health Concern."

This 68th Annual Report is a brief accounting of the activities of the Department of Public Health during a year of difficult decisions, but of continuing progress in providing health care services of high quality to the people of the Commonwealth.



Alfred L. Frechette, M.D., M.P.H.  
Commissioner

\*In 1914 the Legislature passed an act dissolving the Massachusetts Board of Health and creating the State Department of Public Health.

## STATE LABORATORY INSTITUTE

The State Laboratory Institute is the central facility of the Department that is dedicated to the scientific, technical, and laboratory surveillance operations required for the diagnosis and control of diseases caused by infectious, metabolic, and toxic agents. The Institute carries out its activities through four technical laboratory divisions: Biologics, General Diagnostic, Newborn Screening, and Food and Drugs. The Laboratories annually produce more than one million doses of vaccines and serums, and perform a variety of tests on more than one million specimens for clinical purposes (Table 1). In addition to providing consultation to health workers throughout Massachusetts, staff of the Institute pursue challenging research goals.

## BIOLOGIC LABORATORIES

The Division of Biologic Laboratories maintained its traditional ability to protect the access of residents of the Commonwealth to serums and vaccines of highest effectiveness and lowest reactivity. Safety and benefits of the pertussis (whooping cough) vaccine component of the diphtheria-tetanus-pertussis children's vaccine elsewhere in the country and the world have been under attack because authorities thought that reactions to their vaccine might outweigh benefits. In contrast, the Massachusetts vaccine, made and distributed locally by the Biologic Laboratories (400,000 doses per year), has appeared to be well tolerated. Serious reactions have been avoided and public confidence maintained in using the vaccine; thus the disease pertussis remains in abeyance.

Human blood by-products

**Table 1.**  
Output of Services  
State Laboratory Institute  
July 1, 1981 - June 30, 1982.

| Laboratories                          | Test or<br>Unit Doses | Specimens or<br>Clients |
|---------------------------------------|-----------------------|-------------------------|
| Biologics                             |                       |                         |
| Blood derivatives                     | 136,400               | 136,400                 |
| Vaccines                              | 1,122,500             | 1,122,500               |
| Experimental and research<br>products | 11,200                | 11,200                  |
| Newborn Screening                     |                       |                         |
| Hypothyroidism (T4)                   | 161,132               | 161,132                 |
| PKU and related disorders             | 106,744               | (106,744)*              |
| General Diagnostic                    |                       |                         |
| Bacteriology                          | 160,878               | 160,878                 |
| Virology                              | 35,414                | 14,175                  |
| Serology and parasitology             | 169,432               | 145,005                 |
| Food and Drugs                        |                       |                         |
| Suspect food                          | 38,180                | 12,508                  |
| Controlled substances                 | 139,994               | 73,652                  |
| Product quality                       | 1,027                 | 1,027                   |
| Polychlorinated biphenyls             | 36                    | 36                      |
| <b>Total</b>                          | <b>2,082,937</b>      | <b>1,838,513</b>        |

have been developed to cover special needs of children who have diminished resistance to infections that could be life-threatening. Production of the special varicella-zoster immune globulin, which was developed last year, has been stabilized to meet needs in Massachusetts, with surplus for other states available for distribution through Red Cross Blood Centers. This year, several other special immune globulins have been developed for testing; an intravenous formulation has also been introduced to allow delivery of more effective volumes of the antibodies. The new products will be directed against cytomegalovirus and several encapsulated bacteria that cause virulent disseminated infections.

## DIAGNOSTIC LABORATORIES

### Bacteriology Laboratory

The Bacteriology Laboratory, in fiscal year 1982, provided exceptional service in identifying salmonella species implicated in an unprecedented number of persons who had been infected by food and food products. Nearly 40 percent of over 11,000 enteric specimens yielded a pathogenic organism. Work output increased by 22 percent over the previous year despite significant loss of staff, the result of budget cuts.

The Throat Culture Program processed 91,348 specimens, of which 20,205 (22.1 percent) were positive for Group A streptococci, an increase of 2.2 percent over the positivity rate of the previous year. A diagnosis of strep throat, if treated promptly, can prevent rheumatic fever. The Gonorrhea Control Program reported a decrease in the volume of cultures from 63,216 in fiscal year 1981 to 53,554 in fiscal year 1982. Of these cultures, 3,002 (5.6 percent) were positive. The penicillin resistant strain was isolated 54 times.

\*Number represents specimens from Massachusetts, Maine, and Rhode Island that are tested for PKU and related disorders as well as for hypothyroidism; hence, they are a subset of the 161,132 specimens.



A small number of tularemia isolations were made again this year, an indication that the disease remains endemic in the Cape Cod-Islands area. More than 1,000 fungal cultures were made, and nearly 3,000 unusual microbiologic specimens referred from other laboratories were analyzed. Many of these specimens were involved in hospital-acquired infections that are of major concern to infection-control officers. The change in volume of the different kinds of specimens received appears in Table 2.



**Table 2.**  
Summary of Number and  
Kinds of Specimens Examined by  
Bacteriology Laboratory  
July 1, 1981 - June 30, 1982.

| Specimens           | Number         | Positives |
|---------------------|----------------|-----------|
| Enteric pathogens   | 11,411         | 4,427     |
| Gonorrhea           | 53,688         | 3,002     |
| Mycology            | 1,061          | 157       |
| Throat cultures     | 91,348         | 20,205    |
| Reference/Special   | 2,971          | (2,971)*  |
| Other miscellaneous | 399            | (399)*    |
| <b>Total</b>        | <b>160,878</b> | <b>—</b>  |

\*These specimens have been determined to be positive before they are sent to the State Laboratory Institute for confirmation and special testing.

### Virology Laboratory

The Virology Laboratory performed 35,414 examinations on 14,175 specimens. Included are 1,172 pools of mosquitoes, all of which were found to lack eastern encephalitis virus. Fourteen isolates of influenza were characterized as type A or B; this information was used to guide immunization programs. An outbreak of mumps was identified as occurring in recipients of a commercial mumps vaccine that must have been subpotent or deteriorated when administered 10 years earlier.

### Serology Laboratory

The Dr. William Hinton Serology Laboratory found more than

10,000 presumptive positives among approximately 150,000 tests for syphilis. Changes in the selectivity of specimens submitted required greater attention to confirmatory tests. Many requests were received for the diagnosis of toxoplasmosis, another frequently overlooked disease capable of causing serious illness, especially in newborns. Serologic tests identified approximately 100 active or acute infections among 2,000 persons screened.

Since 1961, when rabies was first found in local bats, increasing numbers of bats have been submitted to the Laboratory each year. Of the 694 animals submitted for examination in the Rabies Program in fiscal year 1982, 123

were bats, 11 of which were positive. The frequency of rabies in bats was 9 percent, approximately the same rate as in the previous year. One fox was found to be positive, the first such occurrence since 1940.

Probably the most important contribution made by the Rabies Program was the direct, diagnostic emergency service available at all times to determine whether postexposure rabies immunization was essential, or whether it was safe to forego such treatment.

### Laboratory Improvement Program

The Laboratory Improvement Program was successful in obtaining certification to give continuing education credits. Five formal training courses in diagnostic methodology were held at the Institute. Private laboratories were approved for prenatal syphilis serology and premarital rubella serology. Laboratory training and consultation, principally in mycobacteriology, included 65 site visits.

### NEWBORN SCREENING

The Newborn Screening Division screens all newborns from Massachusetts and other New England states for hypothyroidism and metabolic disorders that are detectable by the program, and that can be rendered harmless by early treatment.

### Hypothyroidism Screening

The Hypothyroidism Screening Program screened 161,132 blood specimens for congenital hypothyroidism during fiscal year 1982. Of these specimens, 76,423 came from Massachusetts, and 84,709 from four other New England states (Table 3). Of the 32 infants identified as hypothyroid, only one might have been diagnosed clinically; thus, without the screening program, the diagnosis would have been missed in the other 31 infants. All the infants received early thyroid replacement treatment expected to prevent a lifetime of mental retardation.

### Metabolic Disorders Screening

Screening of newborn blood specimens for phenylketonuria (PKU) continued to be the mainstay of the program, as it has been

since the inception of the program in 1962. The program tested for other inborn errors of metabolism and continued to test for PKU and three other metabolic disorders for the States of Maine and Rhode Island (Table 4). During fiscal year 1982, the program identified 18 infants for early treatment — 13 for PKU, four for galactosemia, and one for maple syrup urine disease.

Operation of the Newborn Screening Program on a regional basis continued to be cost effective; cost sharing has enabled high quality service to be maintained. The large volume of tests has also permitted quality-control measures based upon detection of enough positives to maintain expertise and alertness.

Table 3.  
Newborn Screening Laboratories  
Hypothyroidism Screening Program  
July 1, 1981 - June 30, 1982.

| State         | No. Screened   | No. Hypothyroid |
|---------------|----------------|-----------------|
| Connecticut   | 40,107         | 11              |
| Maine         | 17,079         | 3               |
| Massachusetts | 76,423         | 13              |
| New Hampshire | 14,281         | 3               |
| Rhode Island  | 13,242         | 2               |
| <b>Total</b>  | <b>161,132</b> | <b>32</b>       |

Table 4.  
Newborn Screening Laboratories  
Metabolic Disorders Program  
July 1, 1981 - June 30, 1982.

| State         | No. Screened   | PKU*      | No. Positive |          |                |
|---------------|----------------|-----------|--------------|----------|----------------|
|               |                |           | Galactosemia | MSUD*    | Homocystinuria |
| Maine         | 17,079         | 1         | 2            | 0        | 0              |
| Massachusetts | 76,423         | 12        | 2            | 1        | 0              |
| Rhode Island  | 13,242         | 0         | 0            | 0        | 0              |
| <b>Total</b>  | <b>106,744</b> | <b>13</b> | <b>4</b>     | <b>1</b> | <b>0</b>       |

\*PKU = phenylketonuria; MSUD = maple syrup urine disease.

## Food and Drugs Laboratories

In addition to the main Food and Drugs Laboratory at the State Laboratory Institute in the Jamaica Plain section of Boston, the laboratory in Amherst continued in operation to make prompt service available statewide (Table 5). The laboratories provided services to the following agencies:

- *Law Enforcement Agencies*

— Demands for analysis of drugs submitted in fiscal year 1982 were approximately as great as in the previous year. Laboratory personnel performed 139,994 tests on 73,652 samples of controlled substances. Identification of an illicit substance was confirmed in approximately three-quarters of the samples. Marijuana accounted for the majority of the samples; however, cocaine and heroin each accounted for more than 4,000 confirmations. A major accomplishment of the year was a reduction in turn-around time for analyses from an average of 55 days to an average of three days (13-day maximum). The improvement corrected the problem of dismissed court cases previously caused by delayed evidence.

- *State Purchasing Agent and State Department of Education* — Staff examined 1,012 samples for evaluation of bid samples before awarding contracts, and for quality assurance of delivered products, including school lunches.

- *Environmental Health, Department of Public Health* — In support of health risk assessment, the laboratories have been developing a capability for accurate measurement of polychlorinated biphenyls and pesticides that can enter the food chain. The Food and Drugs Laboratory initiated an extensive interchange with the federal Food and Drug Laboratories and other state laboratories for purposes of standardization.

**Table 5.**  
Specimens Received by Food and Drugs  
Laboratories  
July 1, 1981 - June 30, 1982.

| Category                  | No. of Specimens |
|---------------------------|------------------|
| Food safety               | 12,508           |
| Forensic analysis         | 73,652           |
| Summer school programs    | 455              |
| State purchasing agent    | 572              |
| Polychlorinated biphenyls | 36               |
| <b>Total</b>              | <b>87,223</b>    |



- *Division of Food and Drugs (Regulatory and Inspection Officers) and Local Health Officers* — Routine laboratory-based surveillance covered food activities that have an exceptional potential for transmission of disease. All 39 milk-testing laboratories in the state were certified on the basis of regular bacteriologic examinations, as mandated by law. Other food products were submitted for analysis on the basis of suspicious gross characteristics or circumstances.

### Research Program Highlights

- *Cytomegalovirus Immune Globulin* — A clinical study was begun in renal transplant patients who may lose the transplanted kidney or die of disseminated cytomegalovirus infection if preventives such as the globulin are not developed.

- *Hepatitis* — Studies were carried out to determine risk factors present in serum of carriers that can predict the relative infectivity of accidental inoculations such as those often sustained by medical workers. Other studies have defined the most cost-effective methods for screening to determine immune status. The largest study tested the ability of the new hepatitis B vaccine, as compared to a placebo, to induce immunity in hospital workers.

- *Newborn Screening Program* — The program carried out an internationally recognized study proving that, even though detection by screening of congenital hypothyroidism may not be completed until several weeks after birth, it is still early enough to prevent the severe retardation that would otherwise begin to appear in the first year of life.



## COMMUNICABLE/ VENEREAL DISEASE CONTROL

The Division of Communicable and Venereal Diseases carries out health protection activities that are the direct responsibility of state government. These encompass health surveillance and disease control to guard the health of the people of the Commonwealth through testing, vaccination, treatment, analysis of disease trends, and the assessment of threats to the population.

### COMMUNICABLE DISEASE CONTROL

The statewide immunization programs of the Department, which expanded as new vaccines became available, continued to record progress in controlling measles, mumps and rubella:

- *Measles* — Reported cases dropped from 19,512 cases in 1965 to 59 cases in calendar year 1981, a decrease of over 99 percent.
- *Mumps* — Reported cases dropped from 9,024 cases in 1968 to 91 cases in 1981, a decrease of 99 percent.
- *Rubella* — Reported cases dropped from 1,461 cases in 1969 to 23 cases in 1981, a decrease of 98 percent.

These programs not only prevented illness and death but saved the Commonwealth approximately \$18 million in actual costs for medical care and institutionalization of patients.

Massachusetts, which has been on a maintenance immunization program against polio since polio vaccine became available, has had only one reported case of polio since 1968. A total of 430,572 doses of trivalent Sabin oral polio vaccine were administered in 1981 by local boards of health, private

physicians, clinics and hospitals. The annual immunization survey of children (63,964) entering kindergarten in September 1981 showed more than 98 percent had already received three or more doses of polio vaccine. The percentages of these children immunized against polio and the six other immunizable diseases showed impressive increases over 1974 (Table 6).

During the 1981-1982 school year, the Division of Communicable and Venereal Diseases also surveyed more than 96,000 school health records of new children entering grades one to 12 in both public and private schools. Immunization levels for these children were: DTP, 94.45 percent; polio, 94.27 percent; measles, 96.33 percent; mumps, 90.89 percent; and rubella, 92.10 percent. The Division continued its survey of children (62,430) in day care centers and found substantial increases over the previous years (Table 7).

**Table 6.**  
Percentage of Immunized Children Entering Kindergarten  
1974 - 1982.

|                |       | 1973-74 | 1974-75 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | Percent Increase Over 1973-74 |
|----------------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------------------------|
| Diphtheria     | } DTP | 88.6    | 93.51   | 95.04   | 96.21   | 95.82   | 96.99   | 97.57   | 98.10   | 97.88   | 10.47                         |
| Tetanus        |       |         |         |         |         |         |         |         |         |         |                               |
| Whooping Cough |       |         |         |         |         |         |         |         |         |         |                               |
| Polio          |       | 86.2    | 92.04   | 94.10   | 95.84   | 94.25   | 97.50   | 97.95   | 98.13   | 97.71   | 13.35                         |
| Measles        |       | 90.3    | 93.53   | 94.60   | 96.21   | 98.32   | 98.60   | 98.86   | 99.09   | 98.82   | 9.44                          |
| Mumps          |       | 59.3    | 69.19   | 78.00   | 84.56   | 89.83   | 92.79   | 98.69   | 99.06   | 98.79   | 66.59                         |
| Rubella        |       | 62.0    | 70.41   | 78.51   | 84.55   | 90.04   | 93.32   | 98.67   | 99.06   | 98.79   | 59.34                         |

**Table 7.**  
Percentage of Immunized Children in Day Care Centers  
1975 - 1982.

|                |       | 1975-76 | 1976-77* | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | Percent Increase Over 1975-76 |
|----------------|-------|---------|----------|---------|---------|---------|---------|---------|-------------------------------|
| Diphtheria     | } DTP | 86.73   | —        | 90.99   | 94.23   | 95.60   | 95.94   | 96.29   | 11.02                         |
| Tetanus        |       |         |          |         |         |         |         |         |                               |
| Whooping Cough |       |         |          |         |         |         |         |         |                               |
| Polio          |       | 85.71   | —        | 89.83   | 94.91   | 96.13   | 96.70   | 96.87   | 13.02                         |
| Measles        |       | 89.31   | —        | 93.22   | 95.82   | 96.79   | 97.54   | 97.83   | 9.54                          |
| Mumps          |       | 77.27   | —        | 85.93   | 92.78   | 96.28   | 97.29   | 97.79   | 26.56                         |
| Rubella        |       | 76.00   | —        | 85.36   | 92.46   | 96.27   | 97.31   | 97.77   | 28.64                         |

\*No survey had been conducted in 1976-77

Rubella in Massachusetts has become a disease of adults as a result of the improvement in the rubella immunization level of children. Of the cases reported in 1974, 20 percent were of adults as compared to 32 percent in 1981. This trend will probably continue since more than 91 percent of children under 18 years of age are protected with the vaccine. The Department has, therefore, continued the rubella program for adults, which was started in 1979 and targeted at four main groups: students in institutions of higher learning, persons 30 years of age and younger who provide patient care in hospitals and other health facilities, students and staff in schools of nursing, and patients in obstetrical-gynecological and family planning clinics.

During the influenza season, virus isolates of the familiar strains of A/Brazil, A/Bangkok, and B/Singapore were confirmed by the State Laboratory Institute. Influenza was observed in pockets throughout the state rather than in widespread outbreaks in a community. Severe budgetary constraints allowed for the purchase of only 126,000 doses of vaccine; each board of health, therefore, received 75 percent of the amount used in the previous year. As in the past year, the influenza vaccine

was well tolerated, and no reports of adverse reactions were received.

Despite the availability of the pneumococcal pneumonia vaccine, pneumonia morbidity and mortality among high-risk Massachusetts residents continued to be a growing concern. The Division has, therefore, again recommended simultaneous administration of influenza and pneumonia vaccines in different sites. Recent findings have indicated that protection from the latter vaccine may last at least for five years and subsequent pneumonia immunizations should not be administered during that period of time. Immunization providers and clinics have been following this advice.

The reported incidence of babesiosis, a malaria-like illness for which no effective chemotherapy is now available, decreased in calendar year 1981. Three identifiable cases were reported on Nantucket and one on Martha's Vineyard, where a focus of the disease exists.

## **VENEREAL DISEASE CONTROL**

In accordance with national standards, the Division of Com-

municable and Venereal Diseases concerns itself with the 16 sexually transmissible diseases. Of these, seven — gonorrhea, trichomonas vaginitis, monilial vaginitis, genital herpes, genital warts, nongonococcal urethritis, and scabies — remained epidemic in Massachusetts and in the nation. Massachusetts had about one and one-half cases of male gonorrhea to one case of nongonococcal urethritis, which may eventually become the number one venereal disease in the United States. Scabies, however, remained on the downward curve of the epidemic cycle. Because of the increase in the cases of nongonococcal urethritis and of genital herpes (also important for its oncogenic potential), the Division will ask the Public Health Council to include these two diseases in the Department's list of reportable diseases. Herpes type 2, for which there is still no specific treatment, made up 10 percent of the Division's clinic load.

The 10,314 cases of gonorrhea reported in calendar year 1981 represented a decrease of 4.5 percent from the previous year, but constituted a 22.2 percent increase over the 8,026 cases reported in 1970 (Fig. 1). Gonorrhea continued to be the number one communicable disease in the state.

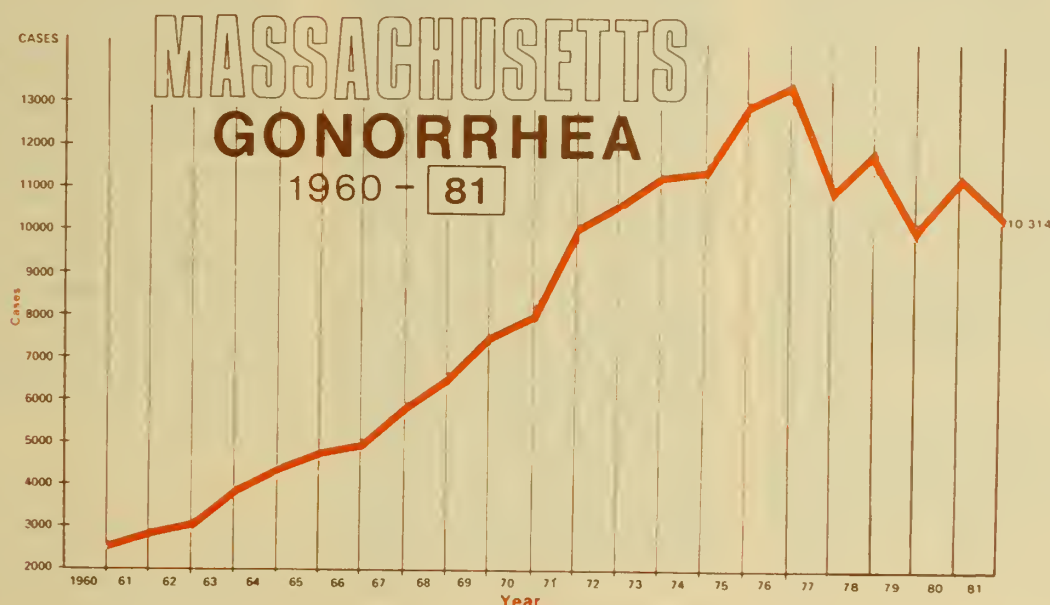


Figure 1. Cases of Gonorrhea in Massachusetts, 1960 - 1981.

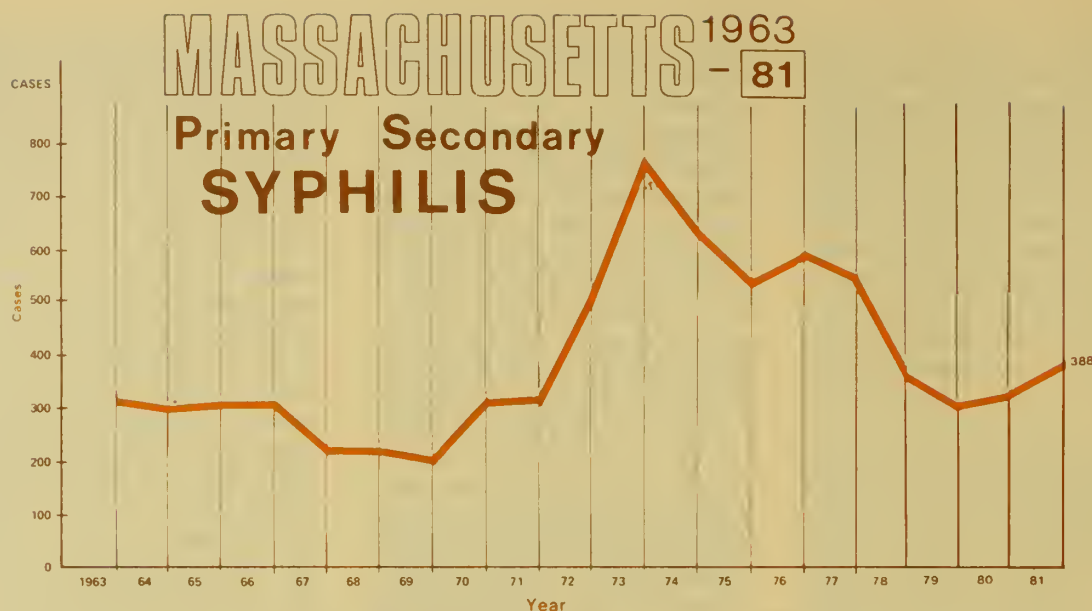


Figure 2. Cases of Primary and Secondary Syphilis in Massachusetts, 1963 - 1981.

For calendar year 1981, the reported number of cases of all stages of syphilis was 975, an increase of 7.8 percent over the 904 cases in the previous year. Cases of primary and secondary syphilis accounted for nearly 40 percent of the cases (Fig. 2). An important factor in the Division's efforts to control the disease was the syphilis interview-contact-tracing procedure, used by the Division's staff in the 18 cooperating state venereal disease clinics with 96 percent of the 636 early syphilis cases reported to the Department of Public Health. A total of 1,313 sexual partners of infected patients were found through the interview process.

The Department's program for the screening of asymptomatic women for gonorrhea control continued with the renewal of a federal grant for \$298,245 for 1982, a reduction of about \$190,000 from the previous year. During the calendar year 1981, the program examined 131,838 women by culture at approximately 100 participating facilities. Of the women examined, 4,868, or 3.6 percent, approximately the same percentage as in the previous year, were found to have the disease.

The grant also allowed the Division to continue its program for the diagnosis, treatment, and epidemiology of gonococcal pelvic inflammatory disease (PID), which have become important aspects of gonorrhea control. A survey of 35 Massachusetts hospitals indicated that the gonococcus was the causative agent in approximately 18 percent of the PID cases diagnosed. Protocols with standards for the diagnosis of gonococcal PID, which had been established by the Division, continued in over 30 hospitals located in areas of high incidence. Measures for ensuring the rapid epidemiologic follow-up of contacts, many of whom were asymptomatic men, were maintained. During calendar year 1981, 357 cases of gonococcal PID were reported; these represented 11 percent of the 3,262 reported cases of gonorrhea in women.

The incidence of penicillin resistant gonorrhea increased by a dramatic 671 percent during the first six months of 1982, when 54 cases were reported as compared to a previous high of seven cases for the entire year of 1981. The majority of cases, thus far, have been linked to prostitutes and their contacts located in Boston

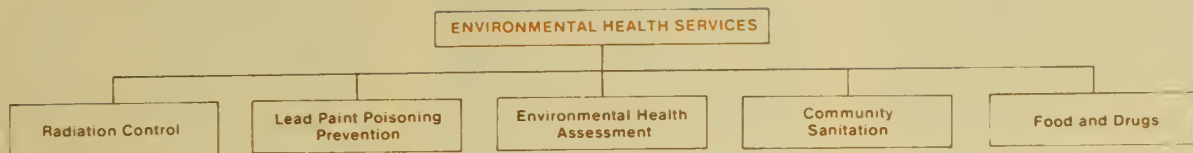
and adjacent communities. Intensive epidemiological measures have been applied to all cases to prevent the spread of penicillin resistant gonorrhea to other parts of the state.

The 18 cooperating venereal disease clinics in the outpatient departments of general hospitals had 42,581 patient visits for examination and treatment during the fiscal year. The cost, which included diagnosis, laboratory work, and treatment, was approximately \$18.62 per patient visit.

In August 1981, the Division became aware of a problem related to Kaposi's sarcoma. Since then, the Division has been evaluating recommendations for establishing a surveillance program to measure the extent of the problem in Massachusetts.

The Division provided clinical and epidemiological training to 218 medical students from the Boston University and Tufts University Schools of Medicine. Nurses and other interested community health workers also received instruction in venereal disease control.





## ENVIRONMENTAL HEALTH SERVICES

The Environmental Health Services Bureau includes the Divisions of Environmental Health Assessment, Radiation Control, Food and Drugs, Community Sanitation, and the Lead Paint Poisoning Prevention Program. Experts in epidemiology, toxicology, environmental hygiene, radiation control, and health standards and criteria respond to, and evaluate, health threats posed by environmental hazards. These include organic chemicals in drinking water, *Gonyaulax tamaris* ("Red Tide"), polychlorinated biphenyls (PCBs) and methylmercury in shellfish, elevated levels of oxides of nitrogen from energy plants, and sources of radiation.

## ENVIRONMENTAL HEALTH ASSESSMENT

During fiscal year 1982, the Division of Environmental Health Assessment (DEHA) consolidated its activities into four program branches: Health Standards and Evaluation, Environmental Epidemiology, Environmental Toxicology, and Environmental Hygiene. The organization has led to a multidisciplinary approach to the investigation and solution of environmental health problems by bringing in from each DEHA branch the required expertise as needed.

### Environmental Epidemiology

Responding to reports of unusual occurrences of diseases thought to be related to environ-

mental factors, the Environmental Epidemiology branch carried out the following studies:

- *Woburn* — A report of a 30-year retrospective study on mortality from childhood leukemia was completed. The findings showed no unusual occurrence of leukemia clusters in time or place.
- *Fairhaven* — A cluster of childhood leukemia was reported. The four children involved lived near a playground where they played. Interviews of parents failed to establish any other features in common, including exposures to toxic agents.
- *Leominster* — Although there has been a significant increase in cases of Hodgkin's disease in persons ranging in age from 12 to 66 years, no unusual geographic distribution was found.
- *Lowell* — Following extensive inquiry about the extent of the potential public health problems resulting from toxic wastes located at the site of a former waste-processing and recovery plant, the Department of Public Health and the Department of Environmental Quality Engineering issued a request for a proposal to investigate the health status of area residents and a suitable control population.

• *New Bedford* — DEHA worked with several local groups, including the Acushnet River Estuary Disaster Committee, to formulate epidemiological and clinical studies of area residents. Some persons who ate fish or lobsters caught in the greater New Bedford Harbor have accumulated body burdens of PCBs that exceed the average.

### Environmental Toxicology

The Environmental Toxicology branch carried out direct evaluations of persons exposed to toxic materials, such as, PCBs, lead, arsenic and thallium, reviewed risks to the public health from exposure to environmental toxins — pesticides, and other air and waterborne hazards. It conducted the following studies:

- *Recombinant DNA* — The Environmental Toxicology branch reviewed the potential public health problems associated with the newly developing technology of recombinant DNA and convened a Special Governor's Advisory Committee on behalf of the Commissioner of Public Health. The committee reviewed the health issues surrounding DNA technology and drafted legislation to permit its regulation.
- *PCBs* — Based on preliminary findings of elevated blood serum levels of PCBs in persons in the New Bedford area, the Environmental Toxicology branch developed a detailed clinical protocol to study persons exposed to these toxins.
- *Childhood Leukemia* — A review of the toxicological factors that might lead to leukemia in children was carried out after the occurrence of a cluster in Fairhaven. Recommendations for tests to be conducted were made to state environmental investigators.

• *Mass Illness of School Children* — An outbreak of illness, characterized by fainting, abdominal pain, nausea and dizziness, among school children in Templeton was investigated in cooperation with the University of

Massachusetts Medical School, Department of Pharmacy. Investigators concluded that the incident was a mass psychogenic response, not the result of exposure to environmental toxins.

• *Thallium, Arsenic, Lead* — Reports of persons and animals thought to have been exposed to thallium, arsenic, and lead from a suspected hazardous waste site in Clinton were evaluated. No evidence of thallium or arsenic was found; however, elevated levels of lead in ducks that had died were traced to lead-based paint covering the barn that housed the ducks.

### Environmental Hygiene

The Environmental Hygiene branch has responsibility for discovering and assessing new technology, such as, hazardous waste-siting projects, coal gasification projects, shellfish depuration technology, and indoor pollutants that may affect public health. Staff worked with the Pesticide Board and a task force to develop a draft policy on the problem of drift. Personnel also provided air sampling and ventilation measurements for large office buildings, for carbon monoxide in parking garages, and for chlorane vapors in homes.

### RADIATION CONTROL

The Radiation Control Program, which is responsible for the protection of public health from all sources of radiation, both ionizing and nonionizing, carried out surveys of diagnostic X-ray units in hospitals, private medical and dental offices, and of nuclear medicine departments, and users of radio isotopes. Surveys were conducted at universities and other facilities that use sources of radiation. Program personnel also surveyed color TV receivers, video display terminals, devices that use lasers, and various consumer products containing radioactive materials.

A great amount of energy was expended in amending the regulations that require the annual registration of all users of ionizing sources of radiation. The registration has been computerized to aid in the scheduling of timely inspections.

A major activity of the program was the extensive environmental surveillance and inspection of fixed nuclear power stations — two in Massachusetts and one in Vermont on the Massachusetts border. Personnel visited the sites every two weeks to ensure the proper operation of monitoring equipment. Thermoluminescent dosimeters, placed around each reactor to check data received from the power companies, were replaced quarterly. In addition, program staff participated in full-scale emergency exercises of the emergency-response plans of the three nuclear reactor facilities. Dose assessment, public relations, and advisory information on the response capabilities were ascertained.

Staff of the Radiation Control Program, responsible for responding to radiation accidents and incidents throughout the Commonwealth, served as the principal coordinators of the Nuclear Incident Advisory Team (NIAT) and participated in monthly training sessions. NIAT includes consultants from academic and industrial institutions throughout the state.

The Radiation Control Program maintained responsibility

for approving plans for radiation protection for all facilities involved in construction, alterations, or reconstruction. Surveys for these facilities were conducted after completion of the work. Additionally, personnel served as primary radiation control experts to other state agencies, such as the Departments of Environmental Quality Engineering, Energy, Public Safety, and Transportation, and the Civil Defense Agency.

During fiscal year 1982, the Radiation Control Program, with the assistance of an advisory committee comprised of experts in industry, academia, and government, began the process of adopting regulations for nonionizing radiation. The Radiation Control Program published, for comments, a first draft of the proposed regulations.

The participation of the Radiation Control Program in the National Conference of Radiation Control Program Directors and in the New England Radiological Health Compact permitted the Department to cooperate with the other five New England states in radiation health activities.

### COMMUNITY SANITATION

The Division of Community Sanitation is responsible, in part, for monitoring and enforcing compliance with certain sections of the State Sanitary Code in correctional facilities, rodent and nuisance control, inspections of





microwave ovens, and monitoring of fluoridation facilities. The Division also has responsibility for developing regulations for the conduct of physical examinations and the keeping of medical records in correctional facilities.

The Division administered the Department's statutory responsibilities for the development of regulations dealing with minimum standards of fitness for human habitation (housing), farm labor camps, recreational camps for children, and correctional facilities. Departmental involvement in these areas, usually the result of citizens' complaints, increased during the fiscal year, perhaps because of cutbacks of funds to local boards of health, which were unable to carry out their responsibilities for housing and recreational camps. Division staff intervened in more than 200 housing complaints. The Department assumed jurisdiction in 25 cases, five of which went to court.

New updated regulations for recreational camping, which went into effect during the fiscal year, were received positively by the camping industry. A spot check of 53 of the approximately 450 camps in the state revealed that most of them met acceptable standards. The Division cooperated with the Office of the Attorney General in investigations of a New York-based camp that had been accused of consumer fraud.

The semi-annual inspection of the 35 state and county correctional facilities, mandated by law, put a strain on the limited staff of the Division as a result of the addition of correctional beds and severe overcrowding in all facilities. The Division worked with the Department of Correction in bringing legal action against the Deer Island House of Correction (City of Boston) because of the totally inadequate sanitary conditions.

The Division worked closely with the Fluoridation Program of the Division of Dental Health in

monitoring and evaluating fluoridated water supplies in 97 communities to ensure optimal fluoride levels of 1.0 parts per million (ppm). Studies were conducted in six communities to determine the financial and engineering feasibility of fluoridating the municipal water supplies.

Two farm labor camps reopened during the year to bring the total number of camps certified by the Division to 36. These camps provided housing for 457 workers. Over 150 microwave ovens were tested at the request of consumers. No problems were noted. Approximately 750 persons received help from the Division in an attempt to solve their sanitation and environmental problems.

Monies received from the Preventive Health and Health Services Block Grant allowed the Division to plan increased activities in rodent control to begin early in the next fiscal year. The funding will pay for the services of a part-time consultant to work with local municipalities, and to monitor and evaluate projects supported by the federal funds.

## **DIVISION OF FOOD AND DRUGS**

The Division of Food and Drugs is the principal consumer-protection agency of state government, in the areas of the safety of foods, drugs, and other consumer products. Its major responsibilities ensure the Commonwealth that:

- Food products and services manufactured or sold within the state are safe and wholesome.
- Drug control and security measures are operative to prevent the illegal diversion of controlled substances.
- Drugs, biological products, medical devices, and cosmetics are safe and properly labeled.
- Hazardous chemicals and injurious pesticides are prop-

erly classified, labeled, stored and maintained in a manner to prevent injury to the public.

- Bedding, upholstered furniture, and stuffed toys are properly labeled and fit for human use.
- Impounded animals used in animal research receive proper care and humane treatment.

At the beginning of the fiscal year, a 26 percent cut in the budget resulted in a greatly reduced staff, a measure necessitating a reduction in the number of inspections and a reorganization of divisional priorities. The functional supervision of the laboratory component of the Division was transferred to the State Laboratory Institute. As a result of an objective review of the management of the Division by an outside team of consultants, and of the Department's own evaluation, key decisions were made: to determine program priorities on the basis of traditional public health models rather than on the consumer-protection model; and to separate responsibilities of other regulatory jurisdictions, such as, federal agencies, local boards of health, and other state agencies, in an attempt to avoid duplication of services.

During fiscal year 1982, staff of the Division conducted 6,755 field inspections, including seafood establishments, retail food stores, restaurants, bakeries, hazardous substances, food processors, dairy processors, food warehouses, and cold storage plants. Approximately 50 inspection-days were spent on two United States Food and Drug Administration Class I and II recalls of canned salmon and tuna fish. The Division issued 11,956 licenses, permits or certificates of registration as required by applicable statutes.

The Division established an active communications program with the public, industry, the Legislature, the news media, and other interested persons as a first step in making its goals and objec-





tives known to the broadest segment of the population.

### **LEAD POISONING PREVENTION PROGRAM**

The Department's Childhood Lead Poisoning Prevention Program provides screening for children who are at risk, distributes screening samples to health care providers, identifies and works to eliminate lead hazards in the environment, and conducts educational programs for both the medical and lay community on the health hazards of lead. During fiscal year 1982, the laboratory of the program analyzed 104,290 blood specimens for lead or erythrocyte protoporphyrin content, and 1,119 nonblood specimens for lead content. Approximately four percent, or 3,339, of the blood samples showed unacceptable levels of lead, according to guidelines of the Centers for Disease Control (CDC). Thirty-one percent, or 344, of the environmental samples showed unacceptable levels of lead, according to the Massachusetts Regulations for Lead Poisoning Prevention and Control.

Inspectors in the program have been assigned to the Department's Regional Health Offices, two in each office. In fiscal year 1982,

they inspected 786 dwellings for lead violations and made 2,247 reinspections to ensure removal of hazards from the children's environment. Over 300 units were brought into compliance. The program also brought 1,163 court actions against landlords to force compliance with the law.

During the year, the Lead Poisoning Prevention Program expanded its operational functions to include a case management system for tracking and coordinating the medical and environmental follow-up of all children with elevated blood levels of lead. An epidemiologist and nurse, who share in the day-to-day operation of the system, have prepared summaries of lead poisoning activities in four selected cities to share with local boards of health and health care providers. A formal educational program for nurses entitled, "An Overview of Lead Paint Poisoning," has been prepared and submitted to the Continuing Education Committee of the Massachusetts Nurses Association.

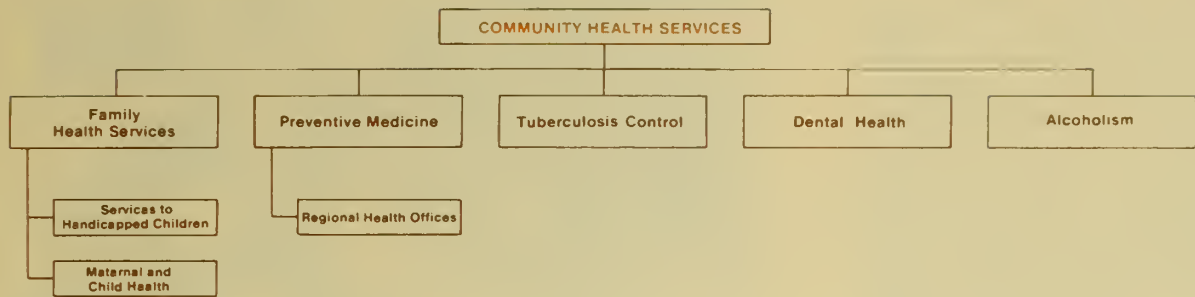
A data processing system for the rapid entry and access of information on all children screened for lead poisoning and for statistical research became operational in April 1982. The system has laid

the basis for more rapid analysis of progress of children, who suffer from lead toxicity, toward recovery.

A crisis-intervention deleading crew to remove lead hazards, as a last resort, began to function in May 1982. For their training, they were assigned to delead a building at the Fernald State School in Waltham, which was to become a day care center for children of employees of the school.

As a result of the change in federal funding from categorical to block grants, three local lead paint poisoning prevention programs in the state were placed under the Maternal and Child Health Block Grant in the Division of Family Health Services. The Division delegated responsibility for the management and monitoring of the lead projects to the Lead Paint Poisoning Prevention Program. The program continued its screening of children in Chelsea who reside near the Mystic-Tobin Bridge, which is being delead by the Massachusetts Port Authority.

During the fiscal year, staff of the program conducted 38 educational seminars that were attended by 236 persons. Fifty-two site screenings were held; 908 children were screened at each site.



## COMMUNITY HEALTH SERVICES

The Community Health Services Bureau, under the direction of an Assistant Commissioner, consolidates the activities of the divisions and units that provide direct services to the people of the Commonwealth: the Divisions of Family Health Services, Preventive Medicine, Tuberculosis Control, Dental Health, and Alcoholism, and the Regional Health Offices.

### FAMILY HEALTH SERVICES

The Division of Family Health Services carries out the Department's programs of community health services for mothers and children, especially those with low incomes or who are at risk for, or suffering from, handicapping conditions. The creation of the Title V Maternal and Child Health Services Block Grant in October 1981 increased the responsibilities of the Division, which are carried out by two sections — Maternal and Child Health and Services to Handicapped Children (SHC). During fiscal year 1982, the Division integrated six block grant programs, reduced program expenditures, and implemented two new programs in perinatal health.

#### Maternal and Child Health

Four major units of the Division's Maternal and Child Health Services worked to provide mothers and children in underserved

neighborhoods with a wide range of preventive health services.

- The efforts of the Perinatal Unit were complemented by the Sudden Infant Death Syndrome (SIDS) Program, which provided postmortem examinations, home visits, and family counseling, referrals and education to the 150 families who had lost an infant to SIDS. The Perinatal Unit also established community-based support services for high-risk infants and families. Ten projects across the state served approximately 1,500 infants and families at risk because of perinatal morbidity, and socioeconomic or psychological factors.

In conjunction with the Division of Preventive Medicine, the Perinatal Unit embarked upon a statewide program to educate and provide diagnostic services to an estimated 150,000 Massachusetts residents who had been exposed to diethylstilbestrol (DES). As the fiscal year was drawing to a close, the Unit was in the process of identifying a number of diagnostic centers to provide services for women who could not afford nor had the insurance to pay for the cost of testing. The Perinatal Unit also continued to administer the premature infant, high-risk for deafness, and the congenital anomaly identification programs, and worked to develop a uniform identification system for high-risk newborns.

- To the School Age Children/Adolescent Unit were added three adolescent pregnancy projects and the three lead paint poisoning

prevention projects, responsibility for which had been delegated to the Lead Paint Poisoning Prevention Program. The Unit provided comprehensive medical and support services to over 1,200 pregnant or parenting teens. In addition, 12,500 adolescents at risk for substance abuse, venereal disease, and pregnancy received counseling, educational, outreach and referral services. Family planning services were offered to adolescents in the greater Lowell area.

The School Age Children/Adolescent Unit maintained the following services: regulating and providing technical assistance to school health programs; administering health screening programs for vision, hearing, and scoliosis; purchasing hearing aids for 400 eligible children; and providing preschool health services through a multidisciplinary team serving 12 towns in the Holyoke-Chicopee area.

- The Primary Care Unit, through its Maternal and Infant Care (MIC) and Children and Youth (C&Y) projects, reached an estimated 20,000 women and children in medically underserved areas.

- The Special Supplemental Food Program for Women, Infants and Children (WIC) is closely related to the MIC and C&Y projects. During the year, WIC provided 30,000 women and children under the age of five, who were determined to be at nutritional risk, with food packages, nutrition counseling, and referrals for health care.



## Services to Handicapped Children

The Title V Block Grant added two programs to existing programs in the Services to Handicapped Children's Unit, to prevent and treat handicapping conditions among children. The two programs — Genetics and the Supplemental Security Income for Disabled Children (SSI-DCP) — had already been administered by the Division. During the fiscal year 1982, the Genetics Unit made progress in developing its program to provide education, information, and counseling. Genetics clinics were held in each of the Department's public health regions. The SSI-DCP, operated under contract with the Office for Children, officially became a functional unit of the Division. Over the past five years, SSI-DCP offered case management services to over half of the approximately 5,000 severely handicapped children who receive SSI.

- The SHC Clinic Unit instituted a number of policy revisions to achieve cost savings while ensuring continuity of care for children who are most in need of services. The age cut-off was lowered from 21 to 18, and new guidelines for financial eligibility instituted. The availability of additional funds later in the fiscal year allowed the Division to continue to pay 100 percent of the per diem hospital rates for handicapped children not covered by insurance. Other policy revisions reduced the number of children served from over 8,000 to less than 6,000 and required a greater number of families to share the costs of clinic care.

- The Community Services Unit provided a range of specialized support services to multiply handicapped children to allow them to function as independently as possible and to remain in the community with their families. Despite a reduction in funding, the Unit maintained a level of ser-



vice comparable to that of the previous year through an open competitive bidding process. Contracts totaling approximately \$1.9 million were awarded for early intervention, developmental day care, integrated preschool, and training and respite programs.

### Research and Demonstration

The Statewide Childhood Injury Prevention Program (SCIIPP) entered its third year. Funded by the federal Office of Maternal and Child Health, SCIIPP had organized projects targeted toward specific injury risks in young children in 14 communities in the state, in cooperation with both public and private agencies. During the fiscal year, SCIIPP published preliminary findings on the extent, nature, and cause of childhood injuries. Evaluation of SCIIPP's effectiveness will aid the Division in selecting statewide strategies to reduce the incidence of childhood injuries.

### Needs Assessment

Responding to the mandate of the Block Grant, the Division developed a methodologically sophisticated needs assessment to aid in developing open competitive bidding processes for WIC and Primary Care Programs in fiscal year 1983. Health status and poverty indicators were statistically combined to produce a score

for each city and town in the Commonwealth; scores were then ranked to determine relative need.

The assessment revealed that the total need for services far outstripped the Division's resources to provide them. The Division can expect to provide access to pediatric and prenatal care to no more than 25,000 of the 140,000 poor and near poor women and children living in the 115 Massachusetts communities identified as having the greatest need for primary maternal and child health care services.

## PREVENTIVE MEDICINE

The Division of Preventive Medicine was created in 1977 to improve the health status of the people of the Commonwealth through a reduction in risk factors, such as cigarette smoking, poor nutrition, physical inactivity, unsafe environments, and stress.

### Program Administration

As the lead agency responsible for the administration of the Preventive Health and Health Services Block Grant, the Division of Preventive Medicine worked cooperatively with departmental program directors and the Task Force on Prevention to ensure a smooth transition from categorical to block grant funding of eight preventive health programs.



Although overall funds were reduced by approximately 25 percent across all program areas, every effort was made to maintain existing services. The Division published a revised *Contractor's Handbook*, organized regional training workshops in development of proposals and skills in grant writing, and effected a consistent process for all requests for proposals.

### Research and Evaluation

After publication of the findings of the Division's Statewide Health Interview Survey in the April 29, 1982, issue of the *New England Journal of Medicine*, Division staff prepared an analysis of smoking trends among the adult population, and of the use of dental health care. Reports on women's health issues, professional and career status, and their relation to major risk factors were in preparation at the end of the fiscal year.

An extensive evaluation of the Division's school-based smoking and alcohol abuse prevention projects, supported by Health Education/Risk Reduction funds from the Centers for Disease Control, indicated increased knowledge among participants of the negative health aspects of smoking and drinking. Other research activities included a comparison of hypnosis and group intervention as strategies in smoking cessation, and the compilation of data on smoking patterns among Massachusetts adolescents.

### Preventive Health Services

The Division supported programs that seek to identify, serve, and follow-up specific populations and occupational groups for whom the risks of chronic disease and disability are great. Four specific programs were operating in fiscal year 1982:

- *The Public Employee Health Project*, called Lifestyle, a comprehensive health promotion program at the worksite, reached

approximately 190 employees of the Departments of Public Health and Public Welfare. Activities included a medical/physical assessment of health risks, lifestyle counseling, educational presentations and workshops, and exercise classes. Preliminary data showed statistically significant changes in specific cardiovascular risk factors. By the end of the fiscal year, plans to offer the program in fiscal year 1983 to the state employees working in the Government Center area were being completed.

provide services included community health centers, hospitals, visiting nurse associations, and local boards of health. Screening was carried out at both worksites and other locations in the communities. During fiscal year 1982, the projects screened 10,861 residents of the Commonwealth. Data indicated that 20.6 percent of the population screened had elevated blood pressures at the initial reading. The projects reached more minorities and persons with less than a high school education than they had in pre-



- *Center for Firefighter Fitness*, developed in cooperation with Bridgewater State College, entered its second year of operation with an expanded mandate and increased support. The Center provided education, training, and technical assistance to fire department personnel in implementing fitness programs based in the fire department. Results of the first months of activity indicated that intervention at the worksite could significantly improve levels of fitness of firefighters and thus reduce disability due to heart disease.

- *Comprehensive Community Hypertension Control Programs* were functioning in 13 communities. Agencies funded by the Division of Preventive Medicine to

vious years: 26.3 percent were nonwhites, and over one-third of all persons screened had less than 12 years of schooling.

- *Women's Health Services* were expanded as a result of the Preventive Health and Health Services Block Grant, which provided funding to community-based programs that offer counseling, referral, advocacy and community-based education for victims of rape. The Division also began planning for the initiation of a comprehensive health education program for women in the state's correctional institutions.

## Health Promotion Services

The Division's Child Passenger Safety Resource Center played a major role in raising awareness of the serious health risks to children riding unrestrained in motor vehicles (Fig. 3), and was instrumental in securing passage of the Massachusetts Child Passenger Safety Law, which went into effect on January 1, 1982. The Resource Center also trained over 1,000 health professionals, law enforcement officials, and persons in community organizations in the implementation of the law.

The Massachusetts Nutrition Resource Center continued to offer free information on nutrition and referrals to consumers and health professionals through a hotline and mail service. During the fiscal year, consumer/provider contacts through mail inquiries increased by 168 percent over the previous year; contacts through the Nutrition Hotline increased by over 20 percent.

The Division, in conjunction with the Division of Family Health Services, began a major public health campaign on DES. The Division's activities included the widespread distribution of educational materials, feature articles and posters to libraries, women's organizations, and health care providers throughout the state, and radio and television announcements. A speakers' bureau was organized to ensure expert information to local communities. In conjunction with the Sidney Farber Cancer Institute, the Division made available to Massachusetts residents, through a free hotline, referrals to local diagnostic services, as well as educational material and information.

The Division worked actively, in cooperation with national efforts, to raise public awareness of high blood pressure control during National Awareness Month in May. The Division produced posters and television spots featuring Marvelous Marvin Hagler, the boxing champion,

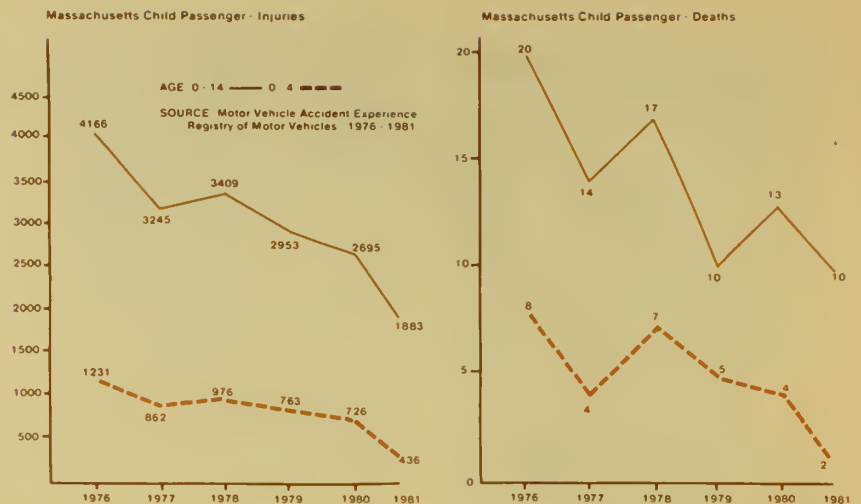


Figure 3. Massachusetts Child Passenger Injuries and Deaths, 1976 - 1981.



that emphasized the need for adequate treatment and continuing care for hypertension.

New educational approaches to the problems of teenage smoking and smoking cessation were developed. Radio spots featuring major performers popular with young people were distributed to all local radio stations in Massachusetts. The campaign was carried out with the cooperation of the federal Office of Smoking and Health. An innovative smoking cessation program, "The Smoking Break," was televised by a major Boston station and broadcast throughout central and eastern Massachusetts. Over 5,000 viewers formally registered for the program, which reached approximately 70,000 smokers. Plans have been completed to replicate the program in western Massachusetts in fiscal year 1983.

## TUBERCULOSIS CONTROL

The Division of Tuberculosis Control has major responsibility for the surveillance of tuberculosis in the Commonwealth, as well as for the development of programs to control and eradicate the disease.

During fiscal year 1982, the control of tuberculosis in Massachusetts suffered its most serious setback in more than 25 years. The tuberculosis case rate increased by almost 12 percent, the first such increase since 1954 and the largest increase since 1915. The number of newly diagnosed cases reported by physicians in calendar year 1981 totaled 504, an increase of 52 over the 452 new cases reported in 1980 (Fig. 4). The 1980 case rate also showed an increase from 7.8 per 100,000 population to 8.7. Reasons for the increase have not been fully determined, although a portion of the increase has been attributed to the large number of immigrants who have entered Massachusetts from countries with a high prevalence of tubercu-

losis. A large part of the increase, however, occurred in the resident population.

Despite severe reductions in funding and personnel at the federal, state, and local levels, which resulted in the elimination of 42 percent of the Division's positions and in a 20 percent reduction of total appropriations, the Division initiated new activities and strengthened continuing programs to prevent further increases in tuberculosis in the Commonwealth. New activities included:

- A complete restructuring of the tuberculosis surveillance system, which defines six Tuberculosis Surveillance Areas (TSA) covering every city and town in the state. A public health nursing advisor has been sent to each TSA to coordinate information among local boards of health, physicians, tuberculosis clinics, and hospitals.

- An automated Central Tuberculosis Case Register to replace the manually operated case register, thus facilitating the processing and tracking of information from each TSA.

- Implementation of a federal grant, given to the Division because of the high prevalence of tuberculosis among refugees, to provide tuberculosis control services to the large refugee population in the state. The Division purchased outreach services and services of interpreters to assist tuberculosis clinics and local boards of health in the examination, treatment, and follow-up of refugees with the disease who do not speak English.

- Robert Koch, discoverer of the tubercle bacillus, honored by the Department's Public Health Rounds, on March 24, 1982, in its program on "The Eradication of

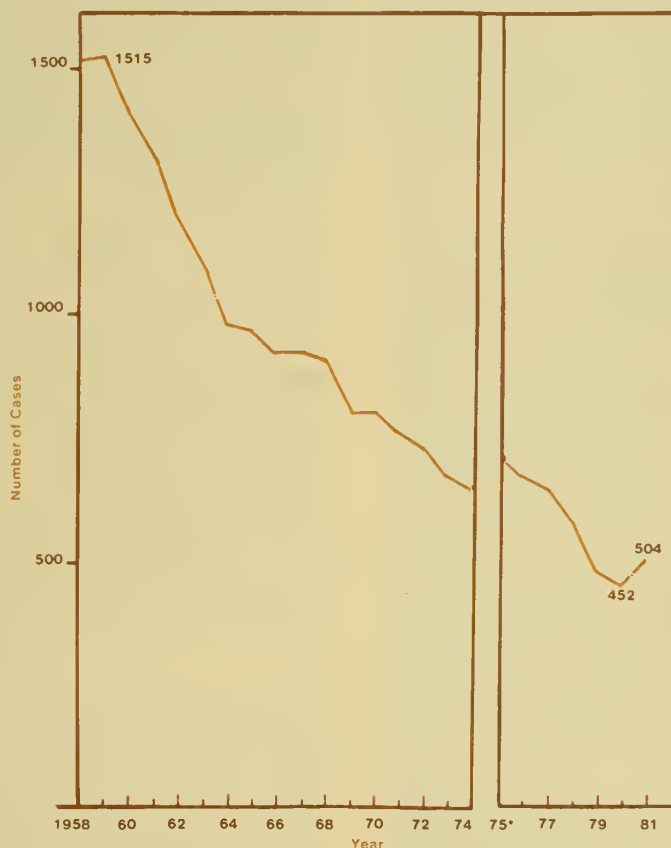


Figure 4. Number of Reported Cases of Tuberculosis in Massachusetts, 1958 - 1981.  
\* National Criteria for Reporting Tuberculosis Cases Change January 1, 1975. Not a True Increase in Cases Over 1974.





L.to R. Thomas J. Kearns, Program Chairman; Dieter Korh-Weser, M.D.; John Moses, M.D., Moderator; Gustave Laurenzi, M.D.; Robert Quinn, Esq.; Gary Epler, M.D.

Tuberculosis by the Year 2000 - Is It Possible?" The Governor had designated the day as "Robert Koch Day" and 1982 as a year of commitment to "Defeat TB Now and Forever," in cooperation with the World Health Organization and the International Union Against Tuberculosis.

During the fiscal year, the Division continued to provide the following services:

- A network of 10 inpatient and 34 ambulatory programs in community hospitals to make tuberculosis diagnostic and treatment services available and accessible to residents of every city and town in Massachusetts. Programs provided 3,756 hospital days of treatment and 24,106 out-patient visits.
- A central bacteriologic laboratory to provide statewide tuberculosis diagnostic and treatment-monitoring services to physicians. Laboratory processed 31,390 specimens.
- Contractual purchase and distribution of tuberculin-testing supplies through local boards of health. Distributed supplies for approximately 250,000 tests.

- Maintenance of a manual statewide case register for the surveillance of tuberculosis, with a reciprocal exchange of information with states and the federal government. More than 1,000 patients on the case register, in addition to 7,000 contacts of cases reported annually.

- A substitution of ambulatory care for inpatient care throughout all or most of the treatment period, with a resultant decline in patient days from more than 265,000 in calendar year 1964 to 4,510 in calendar year 1981, and a reduction in the average length of stay in hospitals (Fig. 5).

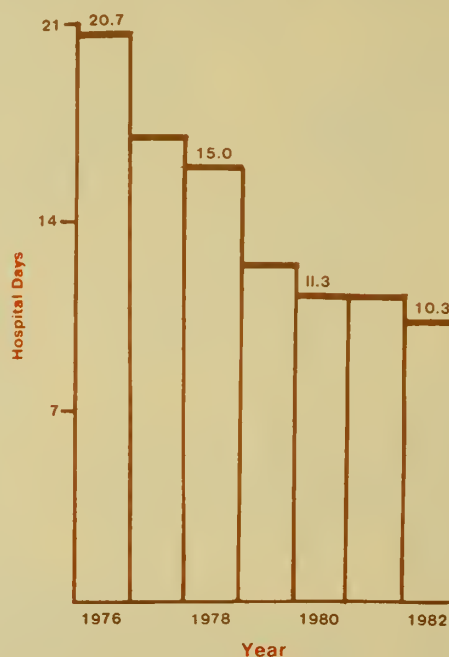


Figure 5. Average Length of Stay in Days, of Patients Admitted To General Hospitals Under Contract for Tuberculosis Treatment in Massachusetts - Fiscal Years 1976 - 1982.

## DENTAL HEALTH

The Division of Dental Health continued to expand its programs of prevention and control of oral diseases in Massachusetts. Work of the Division encompassed:

- *Prevention of Oral Disease* — Fluoridation of public water supplies remained the Division's most urgent objective. The Federal Fluoridation Grant allowed the Division to purchase fluoridation equipment and chemicals for two new communities, Lynn and Lawrence, which have a combined population of 155,000. The project brought the number of new residents added to the state's fluoridation census to over 400,000 during the last two years, and the number receiving fluoridated water in Massachusetts to three million. Replacement equipment was purchased for 12 communities with a total population of 200,000. The monitoring and surveillance program continued throughout the year. The training of local water-works personnel, review of daily and monthly reports, and site inspections resulted in a rise in the mean fluoride level for all monthly samples to 0.96 ppm, the closest to optimum for any year recorded. During the year, three local boards of health ordered fluoridation; all three were challenged and the question went to a referendum. Rockport and Manchester voted to fluoridate. Fluoridation of the two communities, in the next fiscal year, will result in nearly universal fluoridation of the public water supplies of Greater Boston, the North Shore, and the Merrimack Valley.

Enrollment in the school-based fluoride mouth-rinse program rose to 34,000 school children in 25 Massachusetts communities. The Division continued to provide technical assistance to dental personnel in cities and towns that offered preventive services or treatment to school-age children. In addition, the Division served as

the sponsoring agency for continuing education for dental public health hygienists licensed by the Board of Dental Examiners.

- *Dental Care* — The Division of Dental Health continued to work with the Departments of Public Welfare, Mental Health, and Youth Services to meet the dental needs of their clients while containing program costs. The Division worked with the staff of the Department of Public Welfare to revamp the professional review system for approval of dental services, a measure that resulted in a 25 percent reduction in inappropriate or unnecessary requests from the 1981 levels. Assistance was provided to the Division of Mental Retardation of the Department of Mental Health in coordinating its community and institutional dental programs, and steps were taken to improve the dental program of the Department of Youth Services' Judge Connelly Youth Center in Roslindale.

The Division cooperated with the Massachusetts Dental Society to improve access to dental care for the institutionalized elderly. In conjunction with the Special Nursing Home Committee of the Society and with the Harvard School of Dental Medicine, the Division sponsored three regional workshops for nursing home administrators and staff on how to care for the dental needs of elders. A handbook for nursing home administrators and staff on how to identify and care for common dental problems was prepared, and a set of voluntary standards of care adopted for use by nursing home dental consultants.

- *Training and Research in Dental Public Health* — During the year, the Division offered training in dental public health to five student interns from Massachusetts dental schools and schools of public health. Two major research projects were com-

pleted in fiscal year 1982: a summary of the report of practice activities of 4,000 Massachusetts dentists; and a subcomponent of the Division of Preventive Medicine's Health Interview Survey, which dealt with attitudes toward dental health and the seeking of dental care.

## DIVISION OF ALCOHOLISM

In fiscal year 1982, the first year of receipt of federal block grant funds, the Division of Alcoholism reviewed and evaluated all state and federal programs through an open competitive process. The Division was able to fund 211 contracts amounting to \$20,876,274. Approximately 20 percent came from federal monies, which supported 36 projects including eight primary prevention centers, youth programs, women's programs, and other primary prevention and early intervention programs for minorities and the elderly. Among the many activities of the eight primary prevention centers were:

- Development of alcohol abuse prevention programs in schools.

- Development by the Mt. Auburn Hospital regional prevention center of a printed curriculum on alcohol education for grades 3 to 6.

- Training programs on the prevention of alcohol abuse in the workplace, and various activities related to the elderly.

The Division used innovative and effective approaches to their newspaper, television, and other forms of advertising. Participation in the National Institute on Alcohol Abuse and Alcoholism media campaign for women and youth was enhanced by billboard advertising on Massachusetts roadways with a special message for women to help them develop skills in how to refuse to drink. The Division also obtained the cooperation of the Goodyear Tire Company to fly their blimp in





Massachusetts with the message "Friends Don't Let Friends Drive Drunk." The Boston Red Sox flashed the same message on their electric scoreboard during the Red Sox games, and the Independent Taxi Operators Association carried the message on their cabs.

In the area of secondary prevention, the Division increased to 17 the number of projects that seek to identify and treat youths with a drinking problem. To meet the needs of minorities in the state, the Division funded 20 special projects, several of which were added to existing programs directed specifically to the Hispanic community. The Division maintained its commitment to the state's employee assistance programs as a means of early identification of

potential alcoholics. The state driver alcohol education and treatment program offered services to the growing number of persons arrested for drunk driving. More than 15,000 persons were referred to 53 programs in fiscal year 1982. The Division completed a major study of recidivism from a sample of 1,900 persons arrested for drunk driving, and designed and began a study of four intensive intervention Phase II drunk driving projects.

Among the many bills on drunk driving introduced into the Legislature was one from the Division of Alcoholism to increase penalties for second and multiple offenses. The Director of the Division of Alcoholism served on the Governor's Task Force on Drunk Driving. Recommendations of the task

force laid the basis for the comprehensive bill filed by the Governor. By the close of the fiscal year, a new bill was close to passage.

The Division continued to fund the statewide system of 22 detoxification centers that served approximately 20,000 clients for 154,000 bed-days. The Division also maintained its support of 47 halfway houses that served 5,500 clients for 135,000 bed-days, and 44 outpatient programs that had 68,000 patient visits.





## REGIONAL HEALTH OFFICES

The four Regional Health Offices continued to coordinate the Department's general field activities and to act as intermediaries between central service programs, local health agencies, and citizen groups. To the extent that resources were available, regional staff carried out their multifaceted activities and responsibilities. These can be summarized as follows:

- *Technical assistance* — for sanitary programs and consultations on nursing, social work, and nutrition programs.

- *Regulatory* — application and regulations of the State Sanitary Code and Food and Drug laws; inspection of prisons and certification of migrant labor camps.

- *Direct patient services* — the provision of either direct services or contracts with other medical agencies. These activities include the programs of the Services to Handicapped Children, rehabilitation programs, family planning, and other programs of the Divisions of Family Health Services, Preventive Medicine, and Dental Health.

- *Inservice educational programs* — for local nurses, sanitarians,

nutritionists, physical therapists, social workers, and members of local boards of health.

Examples from each region indicate the diverse activities of all the Regional Health Offices:

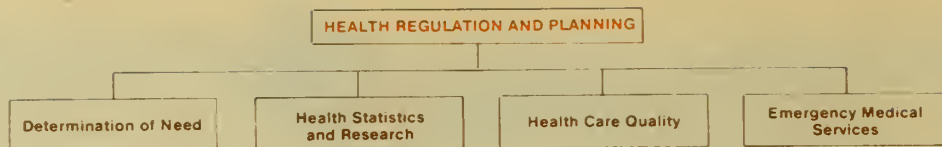
- *Central Region* — Lead paint inspectors carried out the following activities: screenings, 400; housing inspections, 266; re-inspections, 502; court cases, 173; houses deleaded, 26; and educational seminars, 6. Twenty-eight communities, an increase of 12 over the previous year, participated in the Fluoride Mouth-Rinse Program, which reached 12,828 school-age children, an increase of nearly 4,000 over the previous year.

- *Northeastern Region* — The 13 specialized clinics in the network of Services to Handicapped Children served approximately 2,000 clients in the 20 sessions that were held each month. A Genetics Clinic was established in February 1982, and has been well received by both staff and clients. In the five-month period of operation, 17 families received genetic evaluations and counseling.

- *Southeastern Region* — The annual board of health questionnaire was expanded to five pages to obtain more information on

budget and staffing patterns necessitated by Proposition 2½ and on its effect upon local health services. The *Guidebook for Massachusetts Boards of Health* was distributed to the 105 cities and towns in the southeastern region. Regional staff continued to provide technical consultation and help to the active Southeastern Association of Boards of Health.

- *Western Region* — The model Quabbin Health District (Ware-Belchertown) successfully completed its second year with partial funding from the Department. In accordance with terms of the contract, the Health District established a new laboratory that was officially certified. In the next fiscal year, it will begin testing water samples (total and fecal coliform counts) from surrounding towns. Regional staff assisted in planning and implementing a special training seminar for local boards of health at the University of Massachusetts Campus Center in Amherst. Based on the *Guidebook's* chapters on legal authority and responsibilities, enforcement procedures, and liability of local health officials, the seminar was jointly sponsored by the Department and the Massachusetts Health Officers Association.



## HEALTH REGULATION AND PLANNING

Through its program of standard setting, inspection, licensure, and review, the Department works to ensure the people of Massachusetts safe health care of high quality. Under the provisions of the Determination of Need Act, the Department also has the responsibility for preventing unnecessary expansion or renovation of health care facilities.

### HEALTH CARE QUALITY

The Division of Health Care Quality is mandated by state and federal statutes to license and certify health care facilities and services in the Commonwealth. In fiscal year 1982, the Division licensed over 1,900 facilities including nursing homes, rest homes, hospitals, ambulance services, clinical laboratories, clinics, blood banks, home health agencies, and state schools and community-based programs for the mentally retarded. A 41 percent reduction in staff of the Division, the result of severe budget cuts, severely compromised the Division's ability to conduct routine inspections and investigate complaints. The introduction of abbreviated inspection processes of nursing homes and clinical laboratories made it possible, however, to redirect the efforts of the field staff to nursing homes and laboratories applying for original licensure or certification, and to facilities with documented problems of compliance.

The Division investigated 236 complaints of abuse, mistreatment, and neglect of patients in long-term care facilities. Ninety-

one of these complaints involved reports of patient abuse, of which 54 were substantiated. The Division also investigated and resolved 60 complaints about patient care and quality of services in hospitals, clinical laboratories, and ambulance services.

To protect patients and improve patient care, the Division initiated revocation actions against 32 long-term care facilities and one ambulance service, and initiated decertification actions against 11 long-term care facilities, three hospitals for which two emergency patient care receivers were appointed, and two clinical laboratories. Six long-term care facilities with serious violations of the life safety code were either closed or downgraded to a lower level of care. One correction order was issued to an ambulance service because of serious deficiencies in the maintenance of vehicles.

During fiscal year 1982, the nursing home receivership bill, giving the Department the authority to request a court-appointed receiver for the operation of a nursing home in difficulties, was signed into law. Two receivers were appointed during the year, in response to grave problems of patient care and safety.

The Division reviewed and approved the design, planning, and construction of approximately 600 projects in health care facilities involving new construction, renovations, alterations, and acquisition of new equipment to ensure compliance with certain life safety code, building, and Determination of Need requirements.

The Division's mandate to license health care facilities in the

Commonwealth was extended by passage of enabling legislation for the licensure of free-standing and hospital-based birth centers. A preliminary draft of Birth Center Licensing Regulations was completed by the end of the fiscal year. The Division also made progress toward its objective to reduce excessive regulation and eliminate duplicative surveys of facilities and services. Division staff obtained permission of the Public Health Council to proceed with a public hearing on proposed revisions to the hospital licensure regulations. The revisions would implement an agreement between the Department of Public Health and the Joint Commission on Accreditation of Hospitals (JCAH) to offer "deemed" status by the Department to hospitals accredited by the JCAH.

The Division conducted three public hearings across the state on proposed revisions to the Ambulance Licensure Regulations and on amendments to the Controlled Substance Regulations. Amendments to the latter regulations would provide the legal framework for certain emergency medical technicians to administer medications in the prehospital setting under the direction of a physician. Other accomplishments of the Division included:

- Promulgation of the 1980 Rate Incentive Regulations allowing for reward of facilities in outstanding compliance with state licensure and federal certification regulations.

- Completion of the Survey-by-Exception demonstration project and implementation of the process statewide.

- Development of more efficient information management systems.



- Development of the Long-Term Care Ownership Reporting System to allow staff to identify patterns of common ownership of long-term care facilities in the state.

## DETERMINATION OF NEED

Under the provisions of the Determination of Need Law (Chapter 776 of the Acts of 1972), the Department of Public Health is responsible for analyzing the need for, and cost-effective allocation of, health care facilities in the state. The purpose of the legislation was to prevent unnecessary building of new facilities or expansion of existing facilities, to avoid wasteful duplication of services and facilities, and to control spiraling health costs.

During fiscal year 1982, the budget of the DON Program was drastically reduced. The program's professional staff, cut from 14 to two, were thus unable to process applications expeditiously, with a resultant backlog of nearly \$750 million in applications. The difficulties were compounded by an increase of 200 percent in the dollar value of applications received in 1982 as compared to 1980.

The Department worked with other public and private agencies in evaluating the structure and function of the DON Program, and cooperated with the Senate Post Audit and Oversight Subcommittee and the Governor's Health Care Cost Containment Coalition. The latter had been convened to consider the cost implications of hospital capital projects. At the same time, a portion of the DON budget was restored to permit some restaffing of the program. As a result of the careful scrutiny of the program, the Department implemented several measures to increase efficiency:

- The Department adopted a system of expediting smaller pro-

jects with limited effect upon cost or health service organization. "Delegated review" permits the Commissioner to approve applications for such projects without review by the Public Health Council.

- Legislation has been introduced to raise the threshold for DON applications to remove small projects from the program; the measure would reduce the number of filing dates annually from three to one for projects over \$3 million.

- The Department proposed to the Governor's Health Care Cost Containment Coalition that an upper limit be set on the amount of dollars allocated to projects; "affordability" would become a new review standard.

Although the DON Program faced serious challenges, it emerged at the end of the fiscal year with a renewed sense of mission and support, and a greater appreciation of the need for reform. The program was actively assisting the various groups working to revitalize its activities.

## EMERGENCY MEDICAL SERVICES

The Office of Emergency Medical Services (OEMS), an agency of the Department of Public Health since 1973, worked with many organizations and agencies on a regional and statewide basis to improve the delivery of emergency medical care. Working with

regional councils and corporations, local providers and consumers, and with the advice of the Emergency Medical Services Advisory Board, OEMS moved Advanced Life Support Regulations toward promulgation by the Public Health Council. OEMS worked with the Division of Health Care Quality to develop revised regulations to be presented early in the next fiscal year. OEMS also worked closely with the Determination of Need Program in the review of applications related to emergency services, and participated in the analysis of the need for helicopter aeromedical transport. As a result, DON approved the first application for a helicopter service to be conducted by the University of Massachusetts Medical Center in Worcester. OEMS staff also worked on analyses of DON applications for hospital-based advanced life support services in Marlborough and Lowell.

Programs to upgrade resources and to broaden local and state networks of emergency medical services functioned throughout the year:

- OEMS provided administrative coordination and approval of all basic emergency medical technician (EMT) courses in the state. As of June 30, 1982, there were over 14,500 Massachusetts certified ambulance operators and attendants, 78 nationally registered EMT-intermediates, and 96 EMT-paramedics in the state.





- OEMS offered 118 basic training courses with an enrollment of 2,430.

- Training of emergency room nurses was maintained. During the year, 278 nurses participated in the Critical Care Emergency Department Nurse Education Program, which has now been offered to more than 1,100 registered nurses in the Commonwealth.

- OEMS dispersed more than \$600,000 received from federal block grant funds to regional and local projects, including planning or training grants to each of the six regions, monies for evaluation of an innovative helicopter transport project, a training film that can be used nationally, a course for pediatric emergency nurses, and a major feasibility study of the emergency number 911.

## HEALTH STATISTICS AND RESEARCH

The Division of Health Statistics and Research continued to carry out its major functions of collecting, analyzing, interpreting, and disseminating statewide data on vital events, health facilities, and licensed health professionals. As the officially designated Massachusetts State Center for Health Statistics, the Division fulfilled its broader responsibility to provide coordination of data among agencies that collect and use health data, to

provide statistical standards and technical assistance to users of health and demographic data, and to serve as a clearinghouse for information on resources of public health data.

During fiscal year 1982, the Division recorded the following accomplishments:

- The Registry of Vital Records and Statistics processed and analyzed reports of approximately 250,000 births, deaths, and marriages, divorces, and abortions, which were summarized in the *Annual Report of Vital Statistics*. In addition, the registry ascertained the completeness and correctness of approximately 150,000 legal copies of vital records, processed 10,000 amendments and corrections, provided 50,000 certified and 30,000 medical research and abstract copies of records, and provided technical assistance to 3,500 lawyers and representatives of state and federal agencies, and to 7,000 genealogists who regularly use the records.

- The Registry of Vital Records and Statistics completed its first full data year (calendar 1980) of coding multiple causes of death on the Division's mortality data file, and reached the quality standards of the National Center for Health Statistics — an error rate of less than 5 percent.

- In December 1981, after many previous attempts, legisla-

tion was passed to recodify and broaden the statutes governing the vital registration system in the Commonwealth. Chapter 684 of the Massachusetts General Laws, Acts of 1981, granted the Department the power to develop and implement regulations on the registration of vital events. The statute was expected to ensure a coherent and legally sound structure for the vital registration system in the Commonwealth.

- Regulations governing the operation of the Massachusetts Cancer Registry were approved by the Public Health Council and promulgated in December 1981. The Cancer Registry began receiving reports of all new cases of cancer diagnosed in hospitals on or after January 1, 1982.

- Although no new health manpower data were collected, the Health Resources Statistics Unit processed data on 20,000 physicians for 1980 and on 100,000 registered nurses for 1978 and 1980. Publication of the *Health Data Annual*, in a modular format, was resumed after a lapse of three years.

- The Research and Epidemiology Unit developed a Years of Life Lost Mortality Analysis for the state as a whole and for each of the Health Systems Agencies (HSAs), as well as a methodology to project optimal mortality rates, incorporating known risk factors (Fig. 6).

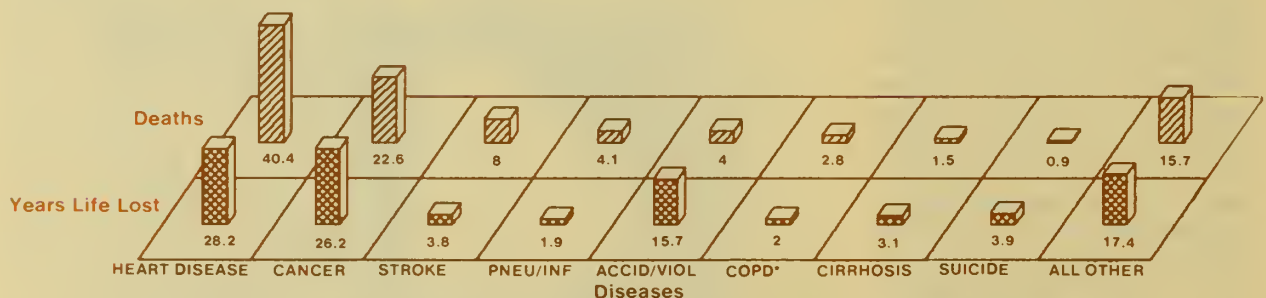


Figure 6. Mortality and Years of Life Lost in Massachusetts, 1980; Percent Distribution by Selected Causes of Death.

\*Chronic obstructive pulmonary disease.

## HOSPITALS

Through the operation of its public health hospitals, the Department has been able to supplement existing resources on a statewide basis and to assume special responsibilities to ensure comprehensive health care to the community. The role of the public health hospitals in the overall delivery of health care in the Commonwealth remained a matter for discussion during fiscal year 1982. Although many services once provided only by these hospitals have been absorbed by the private sector, the hospitals, in general, continued to provide a broad range of clinical services to meet the needs of their patients. Pondville Hospital ended its illustrious history as the oldest state-operated facility for the treatment of cancer in the United States on January 28, 1982, when its sale to the Neponset Valley Health Systems was consummated.

The services and programs of the six remaining public health hospitals are briefly summarized.

- **Lakeville Hospital** — A 100-bed chronic disease rehabilitation facility located in Middleborough in the southeastern region of the state, Lakeville has an inpatient census divided equally between pediatric and adult patients. Although the average inpatient census (73.7 versus 93.4 in 1981) decreased in fiscal year 1982, the number of admissions remained approximately the same, an indication of a shorter length of stay and a continuing shift toward true rehabilitation. The average length of stay was reduced dramatically by 22.8 percent. The reduction was made possible by the efforts of hospital staff to place long-term patients in more appropriate settings to improve independent living. The high quality of the

medical staff was maintained and enhanced by the addition of several specialty consultants.

The dialysis unit of the hospital was closed in April 1982, after two private dialysis units had received approval to care for the Lakeville patients. The initial study of the three-hospital consortium concentrated on options for the future of Lakeville Hospital.

- **Lemuel Shattuck Hospital** — Located in the Jamaica Plain section of Boston, the Lemuel Shattuck Hospital provides inpatient care to patients suffering acute episodes of chronic illness, and outpatient follow-up. Medical and surgical services are provided to clients of the Departments of Correction and Mental Health. The medical correctional unit continued to operate at above 100 percent occupancy; completion of the Department of Correction's holding area increased the hospital's capacity for treatment of Correction's clients on an outpatient

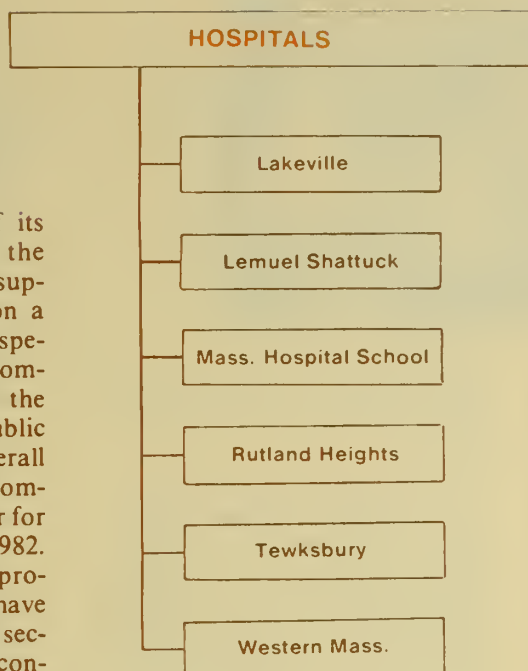
basis. During fiscal year 1982, the hospital admitted 1,699 patients, an increase of 28 percent over the previous year, and had 20,099 visits to the Ambulatory Care Program.

The transfer of 64 patients from the inpatient unit of the Bay Cove Mental Health Center was carried out in a well-planned operation. The move has resulted in greatly improved quality of care to both chronically and acutely ill patients from the South Cove, South Boston, Columbia Point, and North Dorchester sections of Boston.

The Outpatient Department opened several new clinics, including a tuberculosis clinic for the evaluation and treatment of suspected tuberculosis for residents of southwest Boston. Preemployment or health screening services were offered for employees of various state agencies. The pain and stress clinic had a 51 percent expansion rate, and the dental clinic, a growth of 150 percent over the previous year.

The Chronic Care Resource Center (developed through a grant from the Robert Wood Johnson Foundation) initiated, in conjunction with the Ambulatory Care Program, nurse practitioner services at two of Boston's housing facilities for the elderly to bring health care to the residents.

The Gerontological Internship Program, administered by the Department of Psychiatry, has been established to meet two goals: to provide a body of talented graduate students (over 30 volunteers each provided 20 to 30 hours per week for a year) to allow in-depth psychotherapy and follow-up; and to help develop the Shattuck as a gerontological resource to the community and to the local universities.







• **Massachusetts Hospital School** — The Massachusetts Hospital School, located in Canton, is a unique institution that provides medical, educational, and restorative services to physically handicapped but intellectually able children from age three to 21. The trend of placing and keeping handicapped children with such disabilities as cerebral palsy, muscular dystrophy, and spina bifida in the community has resulted in a core population with more severe disabilities at the Hospital School.

The Hospital School continued to provide a wide range of clinical services — orthopedics, cardiology, cerebral palsy, Milwaukee Brace, myelodysplasia — to both inpatients and outpatients from the surrounding communities. When medically indicated, surgery, principally orthopedic, was performed. Despite massive staff reductions of 19 percent, the Hospital School maintained its daily census.

The Gates Program and the Baylies Pilot Project, directed by Hospital School staff, worked closely with the Student Independent Living Experience (SILE), operated by the Hospital School's nonprofit partner, the Medical and Educational Fund for the Handicapped, to reinforce the development of skills necessary for young people to achieve independent living when they leave the Hospital School. Through the generosity of benefactors, the dining room at Baylies Cottage was completely renovated. A fully equipped kitchenette designed for the

handicapped was installed as an aid in teaching the skills of daily living.

• **Rutland Heights Hospital** — The Rutland Heights Hospital, located in Rutland, is a multipurpose facility that serves an adult population in central Massachusetts. During the last eight months of fiscal year 1982, the hospital operated 100 beds (rate of occupancy was 94.9 percent). The number of patient days was 39,658, and the average daily census, approximately 98.

As part of its program of prevention, the hospital maintained a comprehensive health program to prevent, delay, or reduce the need for institutional care. The Adult Care Program served a population within a 10-mile radius of the hospital on an outpatient basis. Clients received physical, occupational, and speech therapy when needed. The alcoholism treatment

program offered rehabilitation through social services, individual, group, and vocational counseling to alcoholics who voluntarily requested treatment.

The long-term care program provided services to maintain or promote the highest level of health of patients suffering from chronic disabling conditions. It also offered emotional and social support and comfort to the terminally ill patient and family.

• **Tewksbury Hospital** — Tewksbury Hospital in the northeastern region of the state, with a bed capacity of 820, is the largest chronic disease, rehabilitation hospital in the state. It also operates a 225-bed program for homeless men, most of whom are chronic alcoholics. Twenty men, who asked for referrals to halfway houses or special treatment centers for alcoholism in the community, were given extensive counseling; where appropriate, referrals were made. On March 3, 1982, the geriatric unit at the Danvers State Hospital was closed and 22 patients transferred to Tewksbury Hospital.

During fiscal year 1982, the hospital maintained an average occupancy rate of 93 percent. The demand for admissions to Tewksbury was so overwhelming that the hospital was forced to stop





issuing admission forms in July 1981.

Responding to an urgent call from the Deputy Commissioner of Public Health, nursing staff from the hospital were driven to Newburyport to care for 60 patients at the Newburyport Manor Nursing Home. The regular staff had walked out because of nonpayment of wages. Despite a severe snowstorm during the weekend of December 4, 1981, Tewksbury Hospital employees reached the nursing home and carried out the assignment with their customary dedication and competence.

• **Western Massachusetts Hospital** — Located in Westfield in Hampden County, the Western Massachusetts Hospital offers long-term care of chronically ill adults, rehabilitation programs, and medical and surgical care of multiply handicapped children. The medical unit continued to provide care to patients with chronic medical conditions that require a higher level of care than that which is available at a nursing home. In addition, the hospital provided respite care for both children and adults, and day-care services for adults with physical disabilities.

The hospital's outpatient clinics offered a wide range of services to high-risk groups, underserved populations, medically indigent persons, and clients of other state and local human service agencies. The Alcohol Rehabilitation Treatment Program was closed on August 29, 1981 because of a mandatory reduction in the work force. Efforts were made, however, to restore the program. Alcoholism Services for Greater Springfield, Inc., was awarded a grant by the Division of Alcoholism to fund a 20-bed inpatient alcoholism program in Region I.

On January 4, 1982, the hospital opened an innovative Palliative Care Unit, a 20-bed inpatient program to provide a support system to help persons who cannot be cared for at home to live effectively in the face of impending death. A multidisciplinary team provided services 24 hours a day, seven days a week; care included psychosocial support for the patient, family, and staff.

The Coma Unit continued to receive extensive news coverage, both national and international, in the press and on television, including the *New York Times Sunday Magazine*, France's *Le Figaro*, and ABC's Nightline.

The Summer Respite Camp Program for multiply handicapped children from three to 14 years of age was filled to capacity. The children received the hospital's regular pediatric services as well as a variety of therapeutic activities — arts and crafts, field trips, music, cooking and supervised swimming.

The Department's public health hospitals admitted 3,537 patients during fiscal year 1982. The decrease of 417 from 1981 reflects the closing of Pondville Hospital six months before the end of the fiscal year. The average length of stay varied from 13.77 days at Pondville to 1,262 days at Tewksbury. The number of outpatient visits — 45,754 — represented a decrease of 15,650 from 1981 (Table 8), a reflection of the closing not only of Pondville Hospital but of the outpatient department of the Rutland Heights Hospital in October 1981.

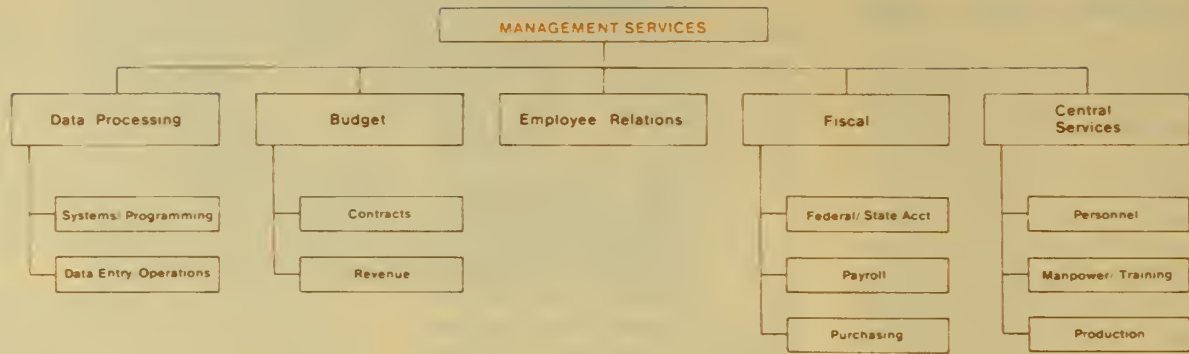
The hospitals continued to expand training of physicians and paramedical personnel as part of the Department's total public health effort. Lemuel Shattuck, Tewksbury, and Western Massachusetts Hospitals graduated 86 practical nurses from their accredited schools of practical nursing.

**Table 8.**  
Public Health Hospitals  
Annual Census Summary — July 1, 1981 - June 30, 1982.

| Hospitals             | Admissions   | Discharges   | Days           | Stay     | Census   | Visits        |
|-----------------------|--------------|--------------|----------------|----------|----------|---------------|
| Lakeville             | 329          | 328          | 26,923         | 75.8     | 73.76    | 8,865*        |
| Lemuel Shattuck       |              |              |                |          |          |               |
| Main                  | 1,329        | 1,294        | 25,902         | 20.37    | 70.96    | 20,099*       |
| Medical Geriatric     | 39           | 49           | 20,304         | 792.99   | 55.63    |               |
| Bay Cove              | 331          | 324          | 13,427         | 16.03    | 55.26    |               |
| Mass. Hospital School | 88           | 83           | 25,495         | 578.53   | 111.02** | 1,574         |
| Pondville             | 310          | 280          | 4,286          | 13.77    | 23.00    | 7,369         |
| Rutland Heights       | 305          | 306          | 35,658         | 128.50   | 97.69    | 193           |
| Tewksbury             |              |              |                |          |          |               |
| Main                  | 247          | 71           | 276,971        | 1,262.00 | 758.82   | —             |
| Homeless Men          | 286          | 294          | 56,913         | 143.25   | 155.93   | —             |
| Western Mass.         | 273          | 220          | 25,434         | 84.56    | 69.68    | 7,654         |
| <b>TOTALS</b>         | <b>3,537</b> | <b>3,249</b> | <b>511,313</b> | <b>—</b> | <b>—</b> | <b>45,754</b> |

\* The dialysis units at Lakeville and Shattuck Hospitals provided 4,228 and 7,404 treatments (including home dialysis), respectively.

\*\* Average daily census at the Massachusetts Hospital School has been adjusted to reflect enrollment days.



## MANAGEMENT SERVICES

Management Services consolidates the activities of the Division of Data Processing, the Budget Office, the Office of Employee Relations, the Fiscal Office, and the Division of Central Services. These Divisions provide centralized administrative services to the Department.

### DATA PROCESSING

The Division of Data Processing provides computer resources to the Department of Public Health through a time-sharing and remote-job entry contract with several bureaus that provide computer services. The Division also provides advice on data processing to the Divisions of the Department, and reviews all requests from Divisions for data-processing services, equipment, and systems. Major projects in fiscal year 1982 included:

- Completion of systems analysis and design for the new Management Information System of

the Division of Alcoholism.

- A continued major role in the development of the integrated Personnel Payroll Management Information System (PMIS) of the Office of Administration and Finance, for which the Department will be the initial test site.

- A Request for Proposals for an automated laboratory and fee-for-service program for the Division of Biologic Laboratories, State Laboratory Institute.

- Preliminary design of the new TB Management Information System for the Division of Tuberculosis Control.

### BUDGET OFFICE

The Budget Office, which supervises the preparation of annual budget requests and spending plans for the Department's 24 state appropriation accounts, continued to oversee the work of the Contracts and Revenue Units.

### EMPLOYEE RELATIONS

The Office of Employee Relations directed the collective bar-

gaining program of the Department, held civil service hearings for Department employees, and represented the Commissioner at hearings of the Civil Service Commission. The Office administered the Disability Retirement Program for the cities and towns of the Commonwealth.

### FISCAL OFFICE

In addition to providing accounting services for \$130 million in state and federal funds, the Fiscal Office oversees the operations of the Payroll and Purchasing Units. During fiscal year 1982, the Fiscal Office continued its 1981 record of reimbursing purchase-of-service providers within seven working days.

### CENTRAL SERVICES

The three units of the Division of Central Services — Personnel, Manpower Training, and Production — continued to provide department-wide services.



**EXPENDITURE REPORT  
DEPARTMENT OF PUBLIC HEALTH  
JULY 1, 1981 - JUNE 30, 1982**

|   | STATE                  | FEDERAL                | TOTAL                   |
|---|------------------------|------------------------|-------------------------|
| <b>COMMISSIONER'S OFFICE</b>                      | \$ 903,499.86          | \$ 79,557.17           | \$ 983,057.03           |
| <b>MANAGEMENT SERVICES</b>                        | 2,337,807.31           | 258,438.56             | 2,596,245.87            |
| <b>LEGAL OFFICE</b>                               | 196,075.31             | 36,163.88              | 232,239.19              |
| <b>Sub Total</b>                                  | <b>3,437,382.48</b>    | <b>374,159.61</b>      | <b>3,811,542.09</b>     |
| <br><b>COMMUNICABLE AND<br/>VENEREAL DISEASES</b> | <br>2,270,842.93       | <br>422,826.44         | <br>2,693,669.37        |
| <b>Sub Total</b>                                  | <b>2,270,842.93</b>    | <b>422,826.44</b>      | <b>2,693,669.37</b>     |
| <br><b>COMMUNITY HEALTH SERVICES</b>              |                        |                        |                         |
| Family Health Services                            | 5,484,643.05           | 18,175,092.92          | 23,659,735.97           |
| Preventive Medicine                               | 488,961.50             | 792,420.47             | 1,281,381.97            |
| Tuberculosis Control                              | 2,519,298.40           | 33,443.94              | 2,552,742.34            |
| Local Health                                      | 619,511.15             | 818,243.70             | 1,437,754.85            |
| Dental Health                                     | 86,285.61              | 161,750.89             | 248,036.50              |
| Alcoholism  | 16,191,413.34          | 4,663,222.00           | 20,854,635.34           |
| <b>Sub Total</b>                                  | <b>25,390,113.05</b>   | <b>24,644,173.92</b>   | <b>50,034,286.97</b>    |
| <br><b>ENVIRONMENTAL HEALTH</b>                   |                        |                        |                         |
| Lead Paint Poisoning                              | 595,521.63             | 412,642.67             | 1,008,164.30            |
| Radiation Control                                 | 409,196.31             | 6,123.96               | 415,320.27              |
| Consumer Products                                 | 1,506,127.81           | 2,936.59               | 1,509,064.40            |
| <b>Sub Total</b>                                  | <b>2,510,845.75</b>    | <b>421,703.22</b>      | <b>2,932,548.97</b>     |
| <br><b>HEALTH PLANNING AND REGULATION</b>         |                        |                        |                         |
| Health Statistics                                 | 726,721.68             | 74,827.40              | 801,549.08              |
| Determination of Need                             | 221,137.14             | 10,755.25              | 231,892.39              |
| Emergency Medical Services                        | 273,396.41             | 50,418.54              | 323,814.95              |
| Health Care Quality                               | 2,312,591.54           | 293,977.39             | 2,606,568.93            |
| <b>Sub Total</b>                                  | <b>3,533,846.77</b>    | <b>429,978.58</b>      | <b>3,963,825.35</b>     |
| <br><b>HEALTH SERVICES</b>                        |                        |                        |                         |
| <b>STATE LABORATORY INSTITUTE</b>                 | <b>4,106,401.81</b>    | <b>275,136.75</b>      | <b>4,381,538.56</b>     |
| <b>HOSPITALS</b>                                  |                        |                        |                         |
| Lakeville Hospital                                | 6,937,580.00           | —                      | 6,937,580.00            |
| Lemuel Shattuck Hospital                          | 15,568,238.00          | —                      | 15,568,238.00           |
| Mass. Hospital School                             | 5,837,425.00           | —                      | 5,837,425.00            |
| Pondville Hospital                                | 3,207,908.00           | —                      | 3,207,908.00            |
| Rutland Heights Hospital                          | 5,521,946.00           | —                      | 5,521,946.00            |
| Tewksbury Hospital                                | 16,379,332.00          | —                      | 16,379,332.00           |
| Western Mass. Hospital                            | 4,914,472.00           | —                      | 4,914,472.00            |
| <b>Sub Total</b>                                  | <b>62,473,302.81</b>   | <b>275,136.75</b>      | <b>62,748,439.56</b>    |
| <b>TOTAL</b>                                      | <b>\$99,616,333.79</b> | <b>\$26,567,978.52</b> | <b>\$126,184,312.31</b> |



THE COMMONWEALTH OF MASSACHUSETTS  
Edward J. King, Governor

EXECUTIVE OFFICE OF HUMAN SERVICES  
William T. Hogan, Jr., Secretary

DEPARTMENT OF PUBLIC HEALTH  
Alfred L. Frechette, M.D., Commissioner

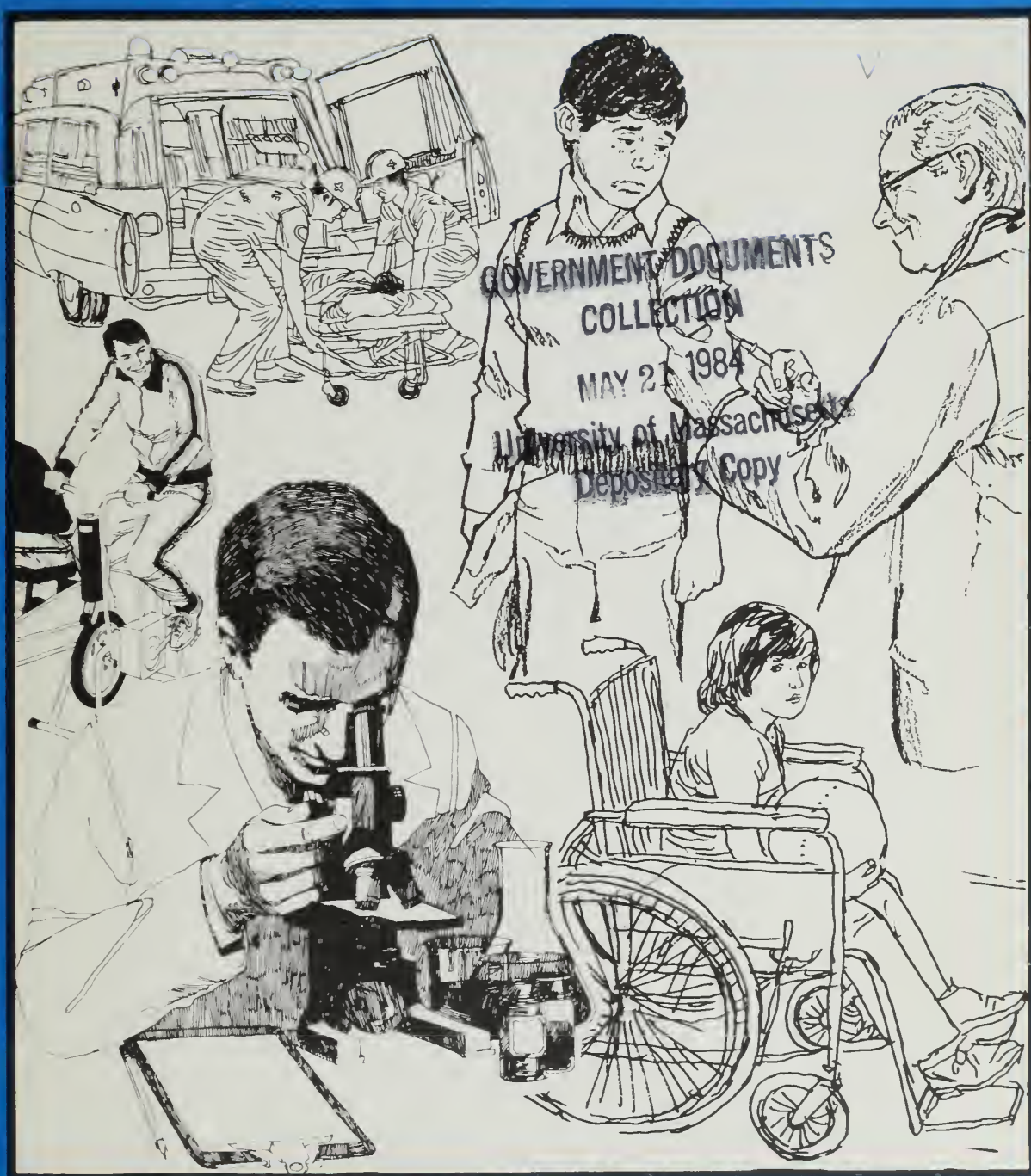
Publication of this Document Approved by  
John Manton, State Purchasing Agent

2m-12/82-172506

Estimated cost per copy \$ 98



MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH  
ANNUAL REPORT  
1982 - 1983



**MASSACHUSETTS  
DEPARTMENT OF  
PUBLIC HEALTH**

**JUNE 30, 1983**

Bailus Walker, Jr., Ph.D., M.P.H.  
*Commissioner of Public Health*  
*Chairman, Public Health Council*

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## FROM THE OFFICE OF THE COMMISSIONER

Fiscal year 1983 was coming to a close when I was assigned the public health portfolio on June 6, 1983. It marked the retirement of my predecessor, Dr. Alfred L. Frechette, who had served the people of the Commonwealth with great distinction for almost 20 years. The achievements of the Department of Public Health during fiscal year 1983, therefore, reflect the concerns and leadership of Dr. Frechette.

Cognizant of the changes that have taken place in public health over the years, the Department has been intensively reexamining its role in the changing scene of health needs. To achieve its objectives and to become more responsive to present and future needs, and demands, of the people of the Commonwealth, the Department established an integrated set of priorities:

1. Protection/Prevention: To protect the public health through disease and illness prevention and the encouragement of self-responsibility for good health.
2. Direct Services: To provide health services to specific populations not adequately treated by the voluntary and private sector.
3. Regulation: To set and monitor standards for health care and environmental sanitation.
4. Planning: To collect and manage data on the health status of the people of the Commonwealth, and of the health facilities that serve them.
5. Management: To manage prudently and efficiently the Department's limited resources by encouraging use of health care resources where they will have the greatest effect on health status.

In the past year, the Department has moved vigorously to give substance to these priorities. Despite the reduction in both state and federal funds, the Depart-

ment was able to keep indispensable programs by targeting its resources to programs in the prevention of avoidable illness and death, in providing direct services to specific populations such as women and children at risk, alcoholics, women in prison, the homeless, and handicapped children.

As concern among both the public and health professionals grew over physical, chemical, and biological components of the environment, the Department carried out investigations of the danger, if any, to the health of the people, and to allay their fears. The Division of Environmental Health Assessment, strengthened by the addition to its staff of two epidemiologists and one toxicologist, responded to concerns about increased risks of environmentally-induced illness.

The Department also endorsed right-to-know legislation that would require the identification and hazardous warning-label of chemical substances. In this effort, the Department joined physicians, epidemiologists, organized labor, and other concerned persons to provide information on the hazards of exposures in the workplace.

Because of the age of housing in Massachusetts, lead-based paint remains a most serious environmental hazard, especially to children. The Department's Division of Childhood Lead Paint Poisoning Prevention has been active not only in deleading old houses, but in offering educational programs about lead and its toxicity to nurses and other health care professionals at the local level. To speed up the retrieval of the results of approximately 100,000 blood-lead analyses, the Division put into operation an automated data system, which now makes monthly and quarterly summaries available to local boards of health.

In the past year, the Department's six public health hospitals continued their broad range of largely chronic and rehabilitative services and instituted several innovative programs. The Lemuel Shattuck Hospital, which has been moving in the direction of a

geriatric center for the community, provided 100 beds for the homeless. Rutland Heights Hospital, which has a long history of treatment of alcoholics, was selected as the pilot site for the residential alcohol treatment program, a legislated alternative to a mandatory jail sentence for drunk drivers convicted of a second offense.

The Division of Preventive Medicine expanded its activities to reach segments of the population that had not been served in the past. In January 1983, a comprehensive health and well-being program, the Women's Health and Learning Center, was established at the Massachusetts Correctional Institution, Framingham, and the Lancaster Pre-Release Center for incarcerated women who are within three months of release. The program provided workshops and counseling to aid the women in coping with health and related issues they will face outside prison. Concentrating on the well elderly, the Division, in cooperation with the Department of Elder Affairs, prepared brochures and a public service announcement to be distributed early in the next fiscal year.

The Department's brochure, "Nuclear Weapons: A Public Health Concern," was so well received that it went into four printings. The Department will continue to alert the people to the catastrophic consequences of a nuclear war and to the overriding need to prevent its occurrence.

The 69th Annual Report\* is a brief accounting of the activities of the Department of Public Health during a year in which the Department worked to carry out its mandated commission — "To maintain, protect and improve the health and well-being of the people" — in the face of the many changes and challenges facing public health.

*Bailus Walker, Jr. Ph.D.*  
Bailus Walker, Jr., Ph.D., M.P.H.  
Commissioner

\*In 1914 the Legislature passed an act dissolving the Massachusetts Board of Health and creating the State Department of Public Health.



## ENVIRONMENTAL HEALTH SERVICES

The Bureau of Environmental Health Services includes the Divisions of Environmental Health Assessment, Radiation Control, Food and Drugs, Community Sanitation, and Lead Paint Poisoning Prevention. Specialists in epidemiology, toxicology, environmental hygiene, radiation control, and health standards and criteria respond to, and evaluate, health threats posed by environmental hazards. The Bureau works cooperatively with the Department of Environmental Quality Engineering to establish standards for monitoring environmental hazards, to interpret engineering data and laboratory analyses, and to provide technical advice and expertise to the public.

## ENVIRONMENTAL HEALTH ASSESSMENT

During fiscal year 1983, the Division of Environmental Health Assessment consolidated its activities into three major, overlapping program areas: Environmental Epidemiology, Environmental Toxicology, and Environmental Hygiene. Many individual projects were carried out by two or more programs, but are reported here under the program with the most responsibility.

### Environmental Epidemiology

Responding to reports of unusual occurrences of diseases thought to be related to environmental factors, the Environmental Epidemiology section carried out the following studies:

- *Ashland* — Ashland has been designated a Superfund site because of contamination of the Sudbury River by chemicals leak-

ing from the site of the former Nyanza Chemical Company plant. The Division received a report of elevated deaths from cancer among Ashland residents during the period 1970 to 1980. At the request of the Ashland Board of Health, the Directors of the Division and of the Cancer Registry met with the townspeople and reviewed mortality data and available incidence data. The figures showed that Ashland did not have an elevated cancer rate.

- *Bedford* — The standardized mortality ratio for female breast cancer in Bedford rose from 81 during the five-year period 1968 to 1973 to 217 in the four-year period 1974 to 1978. Examination of death certificates for more recent years showed that the trend was continuing. High levels of trichlorethylene and dioxane were found in some of the town wells. Discussions with the Bedford Health Officer have indicated support for a case-control study that would emphasize environmental factors associated with breast cancer. A questionnaire has been prepared, and a study protocol drafted for submission to the Department's Human Subjects Review Committee.

- *Holbrook* — Several lagoons used to store hazardous waste overflowed during the spring. The Division investigated reports by Holbrook residents of what they considered to be unusually high rates of cancer. Applying incidence rates from the Connecticut Tumor Registry to Holbrook, staff found slightly elevated cancer mortality rates from 1969 to 1978. Because the rates were not statistically significant and there was no documented exposure to the chemicals, the Division planned no further study.

- *Leominster* — The local board of health reported 17 cases of Hodgkin's disease diagnosed between 1975 and 1982. The cases were mapped and no geographical concentration was apparent. With

the assistance of the Division of Health Statistics and Research, staff from the Division of Environmental Health Assessment interviewed each living case. A report based on the analysis of the data concluded that no common environmental or occupational exposure could be demonstrated.

- *Lowell* — Residents near the Silresim site, a former waste recycling plant, had complained of health problems that they associated with exposure to chemicals emanating from the site. The Departments of Environmental Quality Engineering (DEQE) and Public Health jointly sponsored a study of health effects among residents near Silresim and several control groups in Lowell. The Boston University School of Public Health, responsible for carrying out the study, completed the collection of data during the year, and will submit a report early in the next fiscal year. During the course of the study, investigators found that two companies were emitting large amounts of dimethylformamide near the Silresim site. The original study was expanded to include an investigation of the health status of persons living near these factories.

- *Medford* — A parent, whose child had died from osteogenic sarcoma when a student at Medford High School, submitted a list of students who had reportedly developed cancer while attending the high school. The area hospitals and Boston referral hospitals were asked to notify the Cancer Registry of all Medford residents diagnosed with cancer at ages 13 to 19 during the past eight years. Although all reported cases have not been confirmed, the total number was less than the expected value calculated from the Connecticut Tumor Registry's incidence data.

- *Salem* — Four cases of Hodgkin's disease diagnosed in the past four years were reported by the principal of the Salem High

School. Two additional cases were found through the Salem Hospital Tumor Registry. Thus, six cases in 10 years were verified whereas only 1.6 cases were expected. A report based on interviews with the parents was being prepared.

### Environmental Toxicology

The Environmental Toxicology section carried out evaluations of persons exposed to toxic materials such as PCBs and chlordane, and reviewed risks to the public health from exposure to environmental toxins, and other air and waterborne hazards. It conducted the following studies:

- *PCBs* — A proposal for a two-phase study in the New Bedford-Fairhaven area was submitted to the Centers for Disease Control (CDC) for possible funding under the federal Superfund Act. Phase I would study a random sample of the population for serum levels of PCB to determine extent of exposure. Phase II would compare a group with high serum levels of PCB with a group with low levels to determine clinical and laboratory variables thought to be related to exposure to PCB. Word from CDC was expected in the fall of 1983.

A detailed review of the health effects of PCBs in humans and other species was prepared, and criteria for reopening portions of New Bedford Harbor to fishing were developed. A pamphlet about PCBs written for the general public had been prepared by the end of the fiscal year. A sampling program to determine whether the harbor should remain closed to lobstering was established and carried out jointly with the Division of Marine Fisheries.

Late in the fiscal year, the federal Environmental Protection Agency and the Department of Environmental Quality Engineering found several "hot spots" of PCBs on the grounds of a plant in Norwood that had manufactured

capacitors. The Department designed a study to assess possible exposure to residents of the area.

- *Chlordane* — The Environmental Toxicology unit prepared a comprehensive review of the health effects of chlordane, a toxic substance used as an insecticide, for the Pesticide Board Subcommittee, which resulted in restrictions on the use of chlordane. The subcommittee is responsible for registering all pesticide products used in Massachusetts.

- *Environmental Impact Reviews* — At the request of the Executive Office of Environmental Affairs, the Division reviewed several environmental impact statements for potential health effects. As a result of the Division's recommendation, a project that would have used fill laden with PCBs to create a waterside park in New Bedford was rejected. The Division was also asked to specify what health studies should be done before granting permission to the Boston Edison Company to convert two power plants from oil to coal.

- *Other Studies* — The Environmental Toxicology unit, at the request of the Division of Dental Health, prepared a detailed report on the effects of fluoridation of water supplies on the fetus. The conclusion reached was that fluoride poses no known risk to the fetus and mother at levels of one part per million (1 ppm).

### Environmental Hygiene

The Environmental Hygiene section has responsibility for discovering and assessing new technology, such as hazardous waste-siting projects, coal gasification projects, shellfish depuration technology, and indoor pollutants that may affect public health.

- *Field Studies* — Because of the increased demand for technical assistance despite limited resources, Environmental

Hygiene staff had to limit field services and air tests to requests from local boards of health and other government agencies. During the fiscal year, approximately 35 field surveys involving air tests were carried out for such contaminants as carbon monoxide, chlordane, hydrogen sulfide, formaldehyde, asbestos, carbon dioxide, benzene, toluene, xylene, pentachlorophenol, gasoline, and combustible gases. Approximately 30 surveys in schools and office buildings were carried out.

- *Environmental Health Emergency Response* — Environmental Hygiene staff responded jointly with DEQE to six emergencies involving hazardous materials such as vinyl chloride, PCBs, radiation, mixed solvents, and oils. The Division also responded to other emergencies such as highway accidents and contamination of drinking water.

- *Urea Foam Formaldehyde Insulation* — The Urea Formaldehyde Foam Insulation program was administered by Environmental Hygiene. Several hundred requests for information were answered by both letter and telephone.

## RADIATION CONTROL

The Radiation Control Program, which is responsible for the protection of public health from both ionizing and nonionizing sources of radiation, carried out surveys of diagnostic x-ray units in hospitals, private medical and dental offices. Inspections of nuclear medicine departments and of users of radioisotopes were also conducted. Annually, the surveys include offices of 71 radiologists, 256 family physicians, 1,690 dentists, 18 podiatrists, 272 chiropractors, 331 veterinarians, 115 clinics, and 177 hospitals. A special survey program was initiated to study radiation safety efforts of universities and colleges. Program



personnel also surveyed color TV receivers, video display terminals, devices that use lasers, and various consumer products containing radioactive materials.

A major activity during the fiscal year was the implementation of registration of all facilities that have sources of ionizing radiation. Registration was being computerized to aid in scheduling timely inspections. Under the direction of the Executive Office of Administration and Finance, the Radiation Control Program began charging fees for possession of radiation sources registered with the program. The revenue collected during the second half of the fiscal year was approximately \$150,000.

A major activity of the program was the extensive environmental surveillance and inspection of fixed nuclear power stations — two in Massachusetts and one in Vermont on the Massachusetts border. Personnel visited the sites every week to ensure the proper operation of monitoring equipment. Thermoluminescent dosimeters, placed around each reactor to check data received from the power companies, were replaced quarterly. In addition, the program participated in full-scale emergency exercises of the emergency response plans of the three nuclear reactor facilities.

Staff of the Radiation Control Program, responsible for responding to radiation accidents throughout the Commonwealth, served as the principal coordinators of the Nuclear Incident Advisory Team (NIAT) and participated in monthly training sessions. NIAT includes consultants from academic and industrial institutions throughout the state. All NIAT principal coordinators and consultants participated in a training session.

The Radiation Control Program maintained responsibility for approving plans for radiation protection for all facilities

involved in construction, alterations, or reconstruction. Surveys for these facilities were conducted after completion of work. In addition, personnel served as primary radiation control experts to other state agencies, such as the Departments of Environmental Quality Engineering, Energy, Public Safety, and Transportation, and the Civil Defense Agency.

A major activity of the Radiation Control Program was the adoption of nonionizing radiation regulations. The regulations promulgated by the Department have

now been adopted by the EPA, the National Council on Radiation Protection and Measurement, as well as by the World Health Organization and the responsible agencies of Great Britain and Canada.

The participation of the Radiation Control Program in the National Conference of Radiation Control Program Directors and in the New England Radiological Health Compact permitted the Department to cooperate with the other five New England states in radiation health activities.







## COMMUNITY SANITATION

The Division of Community Sanitation is responsible, in part, for monitoring and ensuring compliance with certain chapters of the State Sanitary Code, reviewing sanitary conditions in state and county correctional facilities, rodent and nuisance control, inspecting microwave ovens, and for monitoring fluoridation facilities. The Division also provides consultation on public and semi-public swimming pools and family-type camp grounds.

Staff of the Division inspected each of the 35 state and county correctional facilities at least twice during the year. The Department recommended closing of the East Wing of the Deer Island House of Correction, which the Superior Court subsequently ordered. Major improvements were later made. Basing itself in part upon reports of the Division, the Federal District Court closed the New Man Section of the Massachusetts Correctional Institution at Walpole. Staff also inspected Department of Youth Services Secure Detention Facilities.

The Division received an increased number of complaints concerning inadequate or

improper enforcement of Chapter II of the Sanitary Code, Minimum Standards of Fitness for Human Habitation. Most of the complaints came from inner-city tenants in the large metropolitan areas. The Division worked closely with the Office of the Attorney General on a consumer protection case related to a landlord who was providing substandard housing to nine Vietnamese families in Boston.

Amendments to Chapter II, incorporating suggestions of a multidisciplinary task force and public hearings, were promulgated during the year. The amendments included requirements for smoke detectors, safe levels of asbestos in the home, and for a reduction of hot water temperatures to lower the number of scald injuries.

Spot checks were conducted by the Division's sanitarians during the summer of 1982 at approximately 40 recreational camps for children. All but two were found to be in satisfactory condition. A continuing concern has been the failure of many boards of health to inspect camps before they open. The City of Boston did not provide the required licensing of the approximately 15 camps in the city. Conferences with city officials corrected the problem.

All farm labor camps were inspected and certified for occupancy. The farm labor population was reduced from 455 to 255 as a result of the closing of two of the largest facilities operated by Consolidated Cigar.

In fiscal year 1983, the Boston Rodent Control Program received funds from the Preventive Health and Health Services Block Grant. The program provided concentrated rodent control activities to a 450-block area of Roxbury and North Dorchester. The City of Lawrence has received a similar grant to start a program next year.

## DIVISION OF FOOD AND DRUGS

The Division of Food and Drugs is the principal consumer protection agency of state government in the areas of safety of foods, drugs, and other consumer products. Its major responsibilities are to ensure the Commonwealth that:

- Food products and services manufactured or sold within the state are safe and wholesome.
- Drug control and security measures in health care, manufacturing, and industrial settings

are operative to prevent the illegal diversion of controlled substances.

- Drugs, biological products, medical devices, and cosmetics are safe and properly labeled.
- Hazardous chemicals and injurious pesticides are properly classified, labeled, stored and maintained in a manner to prevent injury to the public.
- Bedding, upholstered furniture, and stuffed toys are properly labeled and fit for human use.
- Impounded animals used in animal research receive proper care and humane treatment.

The routine compliance and enforcement activities of the Division are divided among four general categories of inspections: Food Safety; Drugs, Devices, and Cosmetics; Consumer Product Safety; Miscellaneous.

During fiscal year 1983, staff of the Division conducted 9,165 field inspections, including seafood establishments, retail food stores, restaurants, bakeries, hazardous substances, food processors, food warehouses, and cold storage plants. Staff also spent approximately 800 hours destroying 65,000 illicit drug samples subsequent to final court action.

The Department used the embargo, one of its primary enforcement tools, in 168 cases where there was sufficient evidence to suspect adulteration and misbranding. Destruction of the product was necessary in 60 cases.

As required by applicable statutes, the Division issued 7,761 permits, which generated \$305,274 in revenue for the Commonwealth. New fees and increases in existing fees have been requested by the Division for fiscal year 1984. Other activities of the Division during fiscal year 1983 included:

- *Increased Shellfish Compliance and Enforcement* — Early in the fiscal year, Massachusetts was implicated in several major outbreaks of foodborne illness. Meetings with New England and other northeastern shellfish-producing states resulted in the joint development of a 10-point plan of action by the Division of Food and Drugs and the Executive Office of Environmental Affairs. As a result, legislation was submitted to make the digging and distribution of contaminated shellfish a felony with greatly increased fines.

- *Administration of Medication* — Regulations were finalized and the process begun to allow medications to be administered by two groups of health workers. Specially trained ambulance attendants employed by qualified ambulance services could now administer medications in prehospital medical emergencies. Dental hygienists and trained monitors of fluoride programs could administer prescribed fluoride treatments to school children.

- *Prescription Drug Monitoring* — The Division coordinated and chaired a Controlled Substance Advisory Committee, composed of representatives from medicine, pharmaceuticals, and law enforcement. The group developed plans for implementation of a multiple-copy system to monitor the prescription of highly abused drugs.

The Division also carried out training sessions for staff both in the laboratory setting and in the field. It improved its hot line teletape information system to provide current information to local boards of health on Division of Food and Drugs policies, interpretation of regulations, technical updates, and selected recall issues.

## LEAD POISONING PREVENTION PROGRAM

The Department's Childhood Lead Poisoning Prevention Program (CLPPP) has two major responsibilities: to eliminate lead poisoning among children under the age of six; and to identify, and provide rapid intervention services to, children already affected by elevated blood-lead levels. Education of both health care professionals and the general public is essential to progress in these two areas.

The Division's inservice educational program, "Overview of Childhood Lead Poisoning and Its Prevention," was approved by both the Massachusetts Nurses Association and the Licensed Practical Nurses of Massachusetts for continuing education credits. The program was offered in 21 communities and attended by over 400 health care professionals. Staff members of CLPPP also participated in Grand Rounds at several hospitals in high-risk communities.

During fiscal year 1983, laboratory staff analyzed 93,374 blood specimens for lead or erythrocyte protoporphyrin content. Of these specimens, 3.2 percent had unacceptable levels of lead according to the guidelines of the Centers for Disease Control (CDC). Staff also screened 1,868 children upon request. Program personnel encouraged community nurses to participate in site screenings as preparation for their conducting future screenings independently.

In fiscal year 1983, inspectors in the program inspected 738 dwellings for lead violations and made 2,425 reinspections. To ensure removal of hazards from the children's environment required 1,206 court appearances. Three hundred and sixty-five dwellings



were deleaded. Staff also carried out 187 inspections of day care centers upon request. Despite staff turnover and several site accidents, the crisis-intervention deleading crew deleaded eight dwellings.

Urgent and high-risk cases — 570 children in fiscal year 1983 — were enrolled in the case management system to ensure timely and appropriate medical follow-up. Of these children, 359 were newly identified cases. Only 94 children were discharged, an indication of the extensive follow-up required before environmental hazards are abated and blood levels return to an acceptable status.

In addition to the provision of direct services through CLPP's central and regional staff, the Division coordinated the activities of special impact projects funded through the Maternal and Child Health Services Block Grant, and administered through an inter-agency agreement with the Division of Family Health Services. High-risk areas were identified through the development of a statewide needs assessment process — the first effort to assess systematically the extent of childhood lead poisoning in every community in the Commonwealth. Approximately 10,000 (2.6 percent) children between the ages of six months and five years were estimated to have elevated lead levels.

A total of \$675,000 was granted to five programs, effective April 1, 1983 - three previously funded under categorical grants in Boston, Merrimack Valley, and Worcester, and two new programs, one in Springfield and one serving four southeastern Massachusetts cities under the auspices of South-eastern Massachusetts University. During the last year, the Boston, Merrimack Valley, and Worcester programs conducted 526 initial inspections and deleaded 319 dwellings. This number, added to the 365 dwellings deleaded

through the activities of CLPPP inspectors, brought to 684 the statewide total of dwellings deleaded in fiscal year 1983.

## STATE LABORATORY INSTITUTE

The high quality of services provided by the State Laboratory Institute has been built upon a long tradition of research and development, a tradition that continued strongly during the 1982-1983 fiscal year. The responsibilities of the State Laboratory Institute are to provide data to guide policy decisions and to adapt or apply technology to new, improved means of providing public health services. These responsibilities are fulfilled through the management and operation of service and support programs:

- Diagnosis of communicable and heritable diseases

- Surveillance for chemical and microbiological contaminants
- Assurance of availability of biologic products through development and production
- Training and education to improve laboratory service in the state
- Physical plant support and maintenance of the Theobald Smith Services Facility in Jamaica Plain.

The Institute carries out its activities through four major laboratory divisions: Food and Drugs, Newborn Screening, Diagnostic Microbiology, and Biologics. During fiscal year 1983, the State Laboratory Institute performed 569,266 analyses and produced and distributed over one million doses of bacterial vaccines and serums (Table 1). In addition, it stored and distributed over 668,000 doses of viral vaccines and antibiotics, and provided technical and medical training courses for technicians, nurses, and physicians.

**Table 1.**  
Output of Services  
July 1, 1982 - June 30, 1983.

| LABORATORIES                                  | TEST OR<br>UNIT DOSES | SPECIMENS OR<br>CLIENTS |
|---|-----------------------|-------------------------|
| Food and Drugs                                |                       |                         |
| Food Safety                                   | 8,312                 | 8,312                   |
| Environmental samples                         | 622                   | 622                     |
| Controlled substances                         | 86,340                | 86,340                  |
| Milk laboratory certifications                | 37                    | 37                      |
| Newborn Screening                             |                       |                         |
| Hypothyroidism, PKU, and<br>related disorders | 163,236               | 163,236                 |
| Urine screening                               | 20,000                | 20,000                  |
| Diagnostic                                    |                       |                         |
| Bacteriology                                  | 145,484               | 145,484                 |
| Virology                                      | 12,844                | 12,844                  |
| Serology                                      | 131,701               | 131,701                 |
| Rabies  | 690                   | 690                     |
| Biologics                                     |                       |                         |
| Blood Products                                | 198,839               | 198,839                 |
| Vaccines                                      | 1,216,039             | 1,216,039               |
| <b>Total</b>                                  | <b>1,984,144</b>      | <b>1,984,144</b>        |



## FOOD AND DRUGS LABORATORIES

The Food and Drugs Laboratories, located in Jamaica Plain and on the campus of the University of Massachusetts, Amherst, analyzed over 93,000 food, water, air and drug samples to support the Department's health protection efforts and the state's public safety programs. The data from the tests provided the basis for regulatory actions, risk assessments, and criminal actions. During the fiscal year, the State Laboratory began to develop analytical capabilities to enable staff to carry out short- and long-term studies to assess environmental contaminants that directly affect human health. Among the studies were the analysis of polychlorinated biphenyls (PCBs) in humans, lobsters, and fish; screening of food for residues of pesticides, and development of test methods for mycotoxins.

The Food and Drugs Laboratories analyzed more than 70,000 samples of controlled substances that were involved in nearly 14,000 criminal cases. A computerized data base was developed that yielded noteworthy improvements in record-keeping. A status report on drug analyses was being prepared for the District Attorneys and District Courts, to be ready in the next fiscal year.

**Table 2.**  
Newborn Screening Laboratories  
Hypothyroidism Screening Program  
July 1, 1982 - June 30, 1983.

| STATE         | NO. SCREENED   | NO. HYPOTHYROID |
|---------------|----------------|-----------------|
| Connecticut   | 41,213         | 5               |
| Maine         | 16,405         | 4               |
| Massachusetts | 77,922         | 21              |
| New Hampshire | 14,324         | 3               |
| Rhode Island  | 13,372         | 4               |
| <b>Total</b>  | <b>163,236</b> | <b>37</b>       |

## NEWBORN SCREENING

The Newborn Screening Program screens all newborns from Massachusetts and other New England states for hypothyroidism and metabolic disorders that are detectable by the program. The diagnoses provide the basis for effective therapy, thereby preventing severe mental and physical disorders.

### Hypothyroidism Screening

The Hypothyroidism Screening Program screened 163,236 blood specimens for congenital hypothyroidism during fiscal year 1983. Of this number, 77,922 came from Massachusetts, and 85,314 came from four other New England states (Table 2). Thirty-seven infants who were identified as hypothyroid received early thy-

roid replacement treatment expected to prevent a lifetime of mental retardation.

### Metabolic Disorders Screening

Screening of newborn blood specimens for phenylketonuria (PKU) continued to be the mainstay of the program, as it has been since the inception of the program in 1962. The program tested for other inborn errors of metabolism and continued to test for PKU and three other metabolic disorders for the States of Maine and Rhode Island (Table 3). During fiscal year 1983, the program identified 17 infants for early treatment — 10 for PKU, six for galactosemia, and one for homocystinuria. The combined incidence rate for these disorders and hypothyroidism was approximately one in 2,500 new births in Massachusetts.

**Table 3.**  
Newborn Screening Laboratories  
Metabolic Disorders Program  
July 1, 1982 - June 30, 1983.

| STATE         | NO. SCREENED   | NO. POSITIVE |              |          |                 |
|---------------|----------------|--------------|--------------|----------|-----------------|
|               |                | PKU*         | GALACTOSEMIA | MSUD*    | HOMOCYSTEINURIA |
| Maine         | 16,405         | 1            | 1            | 0        | 1               |
| Massachusetts | 77,922         | 7            | 4            | 0        | 0               |
| Rhode Island  | 13,372         | 2            | 1            | 0        | 0               |
| <b>Total</b>  | <b>107,699</b> | <b>10</b>    | <b>6</b>     | <b>0</b> | <b>1</b>        |

\*PKU = phenylketonuria. MSUD = maple syrup urine disease.



The Urine Screening Program, which tests for metabolic disorders not detectable in blood samples, was the newest addition to the laboratory. An earlier program of urine screening had to be discontinued during a period of recession in federal and state support. At the request of practitioners and parents, a modified program was redesigned and implemented through all Massachusetts hospitals on a user-support basis. The central expertise, consultation, and data management of the State Laboratory staff were retained.

The effectiveness of a regional, large-scale screening program like the one in New England has been well documented. The large volume of tests has ensured a minimal cost-to-test ratio and superior quality control. Because of the substantial numbers of positive results, staff morale and enthusiasm have been maintained at a peak level.

## DIAGNOSTIC MICROBIOLOGY LABORATORIES

The Division of Diagnostic Microbiology Laboratories tested 290,719 specimens from a variety of sources in fiscal year 1983 and identified the presence of pathogenic organisms in more than 45,000 samples. The diagnosis of infective agents such as rabies, salmonella, eastern encephalitis and legionella provided the critical information for effective medical management and control of communicable diseases. Seven functional programs work within the Diagnostic Division: Bacteriology, Virology, Serology, Rabies, Hepatitis, Tuberculosis, and Laboratory Improvement.

- *The Bacteriology Laboratory* provided specialized and reference services for the diagnosis of rare diseases, routine surveillance of enteric diseases, testing for bac-

terial agents of foodborne outbreaks, and clinical mycology testing services. The laboratory received 145,484 specimens during the fiscal year, of which 31,628 (21.7 percent) were positive. More than one positive specimen may have been received from a single case.

The Throat Culture Program provided physicians and clinics with a rapid, accurate method of identifying group A streptococcal infections, which if unrecognized and untreated by antibiotics, can cause rheumatic fever and acute glomerulonephritis. The program processed 79,972 specimens, of which 15,466 (19.3 percent) were positive for group A streptococci. The Gonorrhea Control Program reported a decrease in the volume of cultures from 53,554 in fiscal year 1982 to 49,835 in fiscal year 1983. Of these cultures, 2,591 (5.2 percent) were positive. The penicillin-resistant strain was isolated 31 times.

The Enteric Pathogens Program, important in the prevention and control of salmonellosis and shigellosis often associated with foodborne illness, tested 11,466 specimens, 42.9 percent of which were positive, an increase of 4.2 percent in the rate of positive findings over last year. The program also identified organisms that cause yersinosis and vibriosis, not common but very serious diseases.

The Special Reference Program tested a total of 3,045 specimens. The services for the diagnosis of rare or exotic diseases and nosocomial, i.e., hospital-associated, infections, are not available elsewhere. Tests were carried out for Legionnaires' disease (16 cases out of 434 specimens) and pertussis (44 cases out of 271 specimens). As part of an investigation of a patient who was hospitalized with a clinical diagnosis of botulism, laboratory staff isolated *C. botulinum* type B from the patient's home-made pepper relish.

The Mycology Program provided microscopic and cultural testing for the diagnosis of pathogenic fungi that are responsible for systemic, subcutaneous, and cutaneous mycotic diseases, and for the diagnosis of nonpathogenic "opportunistic" fungi. These may be found in persons who are more susceptible to infection because of treatment with either immunosuppressive drugs or antibiotics. The program, which provides physicians a service not available from other laboratories, found 103 pathogens in 435 specimens submitted for culture. Thirty cases — nine aspergillosis and 21 cryptococcosis — of fungal disease were identified by serologic tests of 522 specimens.

The Bacteriology Laboratory has now served six years as a reference laboratory for the Proficiency Testing Programs for Bacteriology and Gonorrhea of the Centers for Disease Control. The Massachusetts laboratory is one of ten state or private laboratories nationally that are used as a bench mark for all other laboratories in the federal quality assurance program.

The volume of the different kinds of specimens received by the Bacteriology Laboratory appears in Table 4.

- *The Parasitology Laboratory* identified 55 cases of illness among 213 investigations. The

illnesses included four cases of babesiosis, 21 cases of toxoplasmosis, and 11 cases of blood/tissue parasites. Clinical reports of illness and the high rate (26 percent) of positive findings indicated that enzootic diseases are a greater problem than previously recognized. Tick-borne diseases, such as babesiosis and Lyme disease, appeared to be increasing.

- *The Virology Laboratory* provided complex tests not routinely performed by other Massachusetts laboratories, for example, the rapid isolation and identification of herpes infections. Other unique tests provide the bases for the Department of Public Health's Eastern Equine Encephalitis surveillance program. In anticipation of a high-risk season during 1983, the laboratory developed a rapid identification test using fluorescent antibody methods. The introduction of the new technology and the installation of a microcomputer for data reports have made the encephalitis surveillance program a model for other states.

- *The Serology Laboratory* provided routine and reference test services for the diagnosis of syphilis. In fiscal year 1983, the laboratory tested 13,701 specimens, 12,772 (8 percent) of which were syphilis positive. Because "biological" false positive results caused by other coincident dis-

eases or immunological reactions are important to identify, the laboratory performed 12,772 fluorescent treponemal antibody tests to obtain the necessary diagnostic precision.

- *The Rabies Laboratory* tested animals that were involved in human biting incidents. The prevalence of rabies in bats was also monitored because bat rabies has increasingly moved into urban areas as a serious health hazard. Nearly 700 analyses were carried out during the year. In 25 instances, bats that had bitten humans were proven nonrabid, thus obviating vaccination. In only one instance was a human bitten by a rabid bat. The patient was immunized with human diploid cell rabies vaccine. In January 1983, a 30-year-old man from Waltham was shown by laboratory tests to have rabies, the first case of the disease in Massachusetts since 1935. The case, however, had been contracted by a dog bite in Nigeria in October 1982. The patient died.

Eleven of the bats submitted for examination in the Rabies Laboratory in fiscal year 1983 were positive for rabies, a frequency rate of nearly 10 percent.

- *The Hepatitis Reference Laboratory* tested specimens referred by hospital laboratories and physicians to aid in the diagnosis of unusual cases. In cooperation with the Department of Mental Health, the Department developed a proposal to screen staff of Mental Health Hospitals for hepatitis before immunization with the newly developed Hepatitis B vaccine so that naturally immune persons can forego vaccination. Funding of the proposal will assure protection for the high-risk group of hospital employees and avoid the unnecessary cost associated with vaccination of immune persons.

- *The Tuberculosis Laboratory Program* was transferred from a facility operated by the

**Table 4.**  
Summary of Number and  
Kinds of Specimens Examined by  
Bacteriology Laboratory  
July 1, 1982 - June 30, 1983.

| SPECIMENS         | NUMBER         | POSITIVES     |
|-------------------|----------------|---------------|
| Enteric pathogens | 11,466         | 4,923         |
| Food              | 49             | 3             |
| Gonorrhea         | 49,835         | 2,568         |
| Mycology          | 957            | 133           |
| Serology          | 160            | 8             |
| Throat cultures   | 79,972         | 21,713        |
| Reference/Special | 3,045          | 2,280         |
| <b>Total</b>      | <b>145,484</b> | <b>31,628</b> |



City of Boston to the State Laboratory during fiscal year 1983. The program will be in full operation before the end of calendar year 1983.

- *The Laboratory Improvement Program* continued its service program of state-of-the-art training courses for medical technicians, hospital administrators, nurses and physicians. Lecture and laboratory workshops were regularly provided to update the skill and knowledge of health-care providers in the Commonwealth, thus ensuring the delivery of quality services by public and private systems.

## BIOLOGIC LABORATORIES

The Division of Biologic Laboratories continued to provide a reliable supply of effective vaccines and serums that prevent diphtheria, tetanus, and whooping cough; treat the physical trauma of accident and burn victims; and protect medically-compromised children, such as leukemia victims, from life-threatening infection with chickenpox. The Division produced 1,216 doses of serums and vaccines in fiscal year 1983 and distributed an additional 668,107 doses of vaccines and antibiotics purchased with state and federal funds.

Staff of the Biologic Laboratories developed a totally new product, Bacterial Polysaccharide Immune Globulin (BPIG), to prevent life-threatening bacterial infections in infants too young to be immunized by conventional means. Since last year, the product has been put into clinical trials. Initial results in an exceptionally high-risk group of infants have been promising.

Cytomegalovirus Immune Globulin (CMVIG), a special immune globulin for premature infants that is produced uniquely by the

State Laboratory, has emerged as one of the Institute's most rapidly appreciated contributions. To simplify and permit larger doses of CMVIG, which was shown to protect recipients of bone marrow transplants from life-threatening superinfection with cytomegalovirus, a special formulation for intravenous (IV) administration has now been developed. A clinical trial of the intravenous product (CMVIG-IV) was begun during the year. Initial results have been promising. The laboratory received federal grant support for clinical evaluation of CMVIG-IV in tiny newborns who

require transfusions because of prematurity. Evaluation of CMVIG-IV in babies has just begun.

In addition to the programs managed directly by the State Laboratory Institute, the facility houses other programs of the Department of Public Health — the Division of Food and Drugs, the Childhood Lead Paint Poisoning Prevention Program — and the Racing Commission Laboratory of the Department of Consumer Affairs. The number of people using the facility rose to 600 full-time occupants and 500 visitors daily.



## COMMUNITY HEALTH SERVICES

The Bureau of Community Health Services coordinates the activities of the divisions and units that provide a major part of the Department's direct services to the people of the Commonwealth: the Divisions of Family Health Services, Preventive Medicine, Tuberculosis Control, Dental Health, Alcoholism, and Drug Rehabilitation; the Regional Health Offices, and the Office of Community Health Center Services. Over \$85 million of state and federal funds in a variety of programs are annually transferred throughout the Commonwealth on a city, town, or neighborhood basis by the Bureau's administrative divisions. In fiscal year 1983, they awarded 500 individual contracts for a wide range of programs that reflect the Department's strong orientation toward prevention.

## FAMILY HEALTH SERVICES

The Division of Family Health Services carries out the Department's programs of community health services for mothers and children, especially those with low incomes or who are at risk for, or suffering from, disabling conditions. Through state funds, federal Maternal and Child Health Block Grant funds, and funds from the Special Supplemental Food Program for Women, Infants and Children (WIC), the Division carries out its responsibilities through two sections — Maternal and Child Health (MCH) Services and Services to Handicapped Children (SHC).

### Maternal and Child Health

Three major programmatic units of the Division's Maternal and Child Health Services, the

result of the consolidation of four units during the fiscal year, worked to provide mothers and children in underserved neighborhoods with a wide range of preventive services, and to ensure access to health care of high quality.

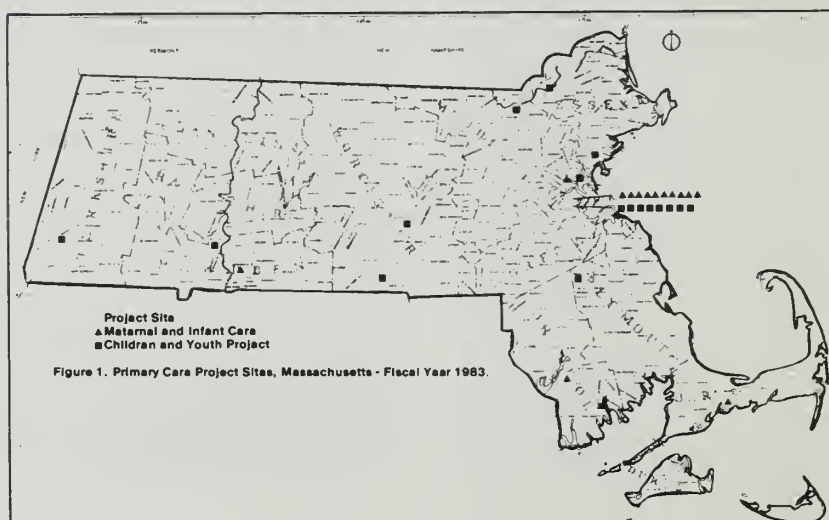
- *The Perinatal, Preschool and School Health Unit* provided services and support services that focused on the prevention of death, disease, and disabling conditions. In conjunction with the Division of Preventive Medicine, the unit implemented a statewide program to educate and provide diagnostic services to an estimated 150,000 Massachusetts residents who have been exposed to diethylstilbestrol (DES). By the end of the fiscal year, approximately 100 women had been evaluated at seven approved hospitals across the state. The Division paid for 60 percent of the women, who could not afford the screenings.

The unit also pilot-tested a high-risk infant birth-reporting system with five Massachusetts hospitals. When fully operational, the system will consolidate three existing reporting systems and identify 10,000 infants at risk for disease and death. One follow-up and referral system developed by the unit provided over 1,500 infants and families with community-based support servi-

ces, primarily home care.

The Perinatal, Preschool, and School Health Unit continued to support the following services: education and support for the approximately 150 families who, each year, lose an infant to the Sudden Infant Death Syndrome; purchase and repair of hearing aids for 400 eligible children; preschool health services through a multidisciplinary team in 12 towns in the Holyoke-Chicopee area; hearing and vision screening of over 900,000 school-age children, and scoliosis screening of over 160,000 children; through the Massachusetts Poison Information Center, follow-up of 75,000 poison control hotline calls, a tripling of the volume of calls since 1978.

- *The Primary Care Unit*, through its Maternal and Infant Care (MIC) and Children and Youth (C&Y) Projects, provided comprehensive prenatal and pediatric multidisciplinary care to high-risk, low-income mothers and children. Medical care, augmented by social, nutritional, family planning, dental and other preventive health services, were made available. In fiscal year 1983, contracts were awarded for 14 MIC and 17 C&Y projects serving areas of high need in the state as determined by an assessment that ranked every city and town in Massachusetts (Fig. 1). These 31





projects, funded as of January 1, 1983, will serve 3,200 pregnant women and 45,000 children on an annual basis, an increase of approximately one-third over the previous 20 projects. Data from the MIC Projects for calendar year 1982 indicated that the programs were reaching a high-risk group — 31 percent of the women were under age 19 at time of delivery, 64 percent were unwed, 46 percent over age 20 had not completed high school, and 65 percent were nonwhite. The Divisions of Family Health Services and Preventive Medicine collaborated in developing smoking cessation programs in these agencies, with the aim of reducing low birth weight infants. For women who reported regular use of tobacco, the rate of low-weight births was 11.6 percent as compared to 6.8 percent for nonsmokers.

Comprehensive Adolescent Health Programs provided health care for 11,000 adolescents. In addition, 11,000 teens, parents, and professionals received educational services on such topics as nutrition, contraception, adolescent pregnancy, and substance abuse; 800 pregnant and parenting teens received health care, education, counseling and other support services through programs funded by both state and federal MCH block grant funds.

- *The Special Supplemental Food Program for Women, Infants and Children*, more commonly known by its acronym WIC, provided over 40,000 women and children under the age of five, who were determined to be at nutritional risk, with food packages, nutritional counseling, and referral for health care. This number represented a 25 percent increase over the number of participants in the previous fiscal year. The Massachusetts WIC program received a \$240,000 grant from the U.S. Department of Agriculture (USDA) to design and implement a system to identify vendors most likely to be

abusing the program. Massachusetts is the lead state in a 10-state consortium established by USDA to deal with vendor fraud and abuse. The state's program, it has been estimated, will save nearly \$500,000 annually.

### Services to Handicapped Children

Four units within the Division's Services to Handicapped Children provided services to prevent, identify, and treat handicapping conditions, with emphasis on providing support necessary to keep children at home or in the community.

- *The Genetics Services Unit* provided genetic testing, screening, diagnosis of, and counseling to, children in the SHC's clinics. In fiscal year 1983, the unit funded a hotline to provide information on the effects of hazardous substances on the health of pregnant women and their unborn children. From December 1982 through June 1983, more than 600 calls were received by the hotline: 470 came from pregnant women, a smaller number from spouses and relatives, and the remainder from health care professionals and other agencies (Table 5).

- *The Community Services Unit* provided a range of special-

ized support services to multiply handicapped children and their families, including developmental day care, integrated preschools, camperships, respite and home care. In fiscal year 1983, the Division of Family Health Services became responsible for early intervention (EI) programs when the EI programs of the Department of Mental Health were transferred to the Department of Public Health. A grant of \$700,000 from the state legislature allowed for an expansion of services to 2,300 children from birth to three years of age.

A state appropriation allowed the unit to provide funds to families who wished to care for their respirator-dependent children at home. The Division also worked closely with the Massachusetts Medicaid program to take advantage of a federal option to provide Medicaid coverage for services to these children, and to determine how Medicaid could adopt a long-term solution to home care for the chronically ill child.

The unit also expanded its multidisciplinary Medical Review Team to include representatives from other state agencies. Through interagency cooperation and coordination, the Medical Review Team helped to prevent

**Table 5.**  
Environmental Hot Line  
Requests from December 1982 through June 1983.

| TYPE OF INFORMATION REQUESTED       | NUMBER OF REQUESTS |
|-------------------------------------|--------------------|
| Prescribed medications              | 216                |
| Environmental and chemical exposure | 174                |
| Radiation exposure                  | 83                 |
| Occupational health hazards         | 69                 |
| Congenital defects                  | 36                 |
| Illegal drugs                       | 34                 |
| Alcohol                             | 30                 |
| Infections                          | 29                 |
| Smoking                             | 18                 |
| Others                              | 83                 |
| <b>Total</b>                        | <b>772</b>         |



unnecessary institutionalization of severely handicapped children.

- *The Clinic Unit*, through specialized clinics directly operated by the Division, or from which services were purchased, provided comprehensive multidisciplinary habilitative services to 6,210 severely handicapped children during fiscal year 1983; the daily caseload was approximately 4,800.

- *The Case Management Services Unit* (CMSU), which became operative on October 1, 1982, integrated the activities of the Supplemental Security Income-Disabled Children's Program (SSI-DCP). The unit, operating in each of the four regional health offices, and a fifth in Boston, provided technical assistance, training, advocacy and development of individual service plans for children receiving SSI and their families. These services have been extended to other handicapped children enrolled in SHC programs.

### Needs Assessment

The Division of Family Health Services continued to strengthen its capacity to evaluate maternal and child health needs and problems. The resultant assessments have been used to plan services and develop policies. In conjunction with the Department's Childhood Lead Poisoning Prevention Program, the Division developed a needs assessment to guide allocation of funds for the prevention of lead poisoning.

Following reports in the media of increasing malnutrition among Massachusetts children, the Division began a survey of the nutritional status of children in the Commonwealth. The Massachusetts Nutrition Survey studied children under the age of six in areas of the state at high risk for child health problems. Data were collected on height and weight, blood sample indicators, and socioeconomic status. Analysis

and publication of the results will be ready in the fall of 1983.

### Research and Demonstration

The Statewide Childhood Injury Prevention Program (SCIPP) completed its third year under a grant from the federal Office of Maternal and Child Health to study childhood injuries and to develop strategies to reduce their frequency. During the fiscal year, SCIPP continued to evaluate the results of its demonstration projects in 14 communities in the state. Preliminary findings on the extent, nature, and cause of childhood injuries have been published; one article appeared in the *New England Journal of Medicine*, October 14, 1982. By the end of the year, the Division had begun to plan for the development of an Injury Prevention Resource Center to provide information and technical assistance, coordination, and evaluation of existing activities to prevent injuries, and to develop new programs on a statewide basis.

## PREVENTIVE MEDICINE

During fiscal year 1983, the Division of Preventive Medicine continued its efforts to reduce unnecessary morbidity and mortality among the people of the Commonwealth through a comprehensive program of risk reduction, health education, and preventive health services. It geared its efforts to the needs of high-risk, underserved populations and communities, as well as to the overall requirements of the general public for health information.

### Program Administration

The Division continued to play a key role in the administration of the Preventive Health and Health Services Block Grant. Working with departmental program direc-

tors and the Task Force on Prevention, the Division developed the state's grant application and assisted in the implementation of block grant hearings.

### Research and Evaluation

The Research and Evaluation Unit worked with Division staff in the implementation of a number of program studies and ongoing research projects, and recorded the following achievements:

- A one-year follow-up evaluation of the public employee health promotion program, *Lifestyle*, was conducted. Significant improvement in key indicators of cardiovascular health status among participants was recorded.

- A methodology was developed for combining socioeconomic variables into a predictive analysis of prevalence of risk factors. The methodology was applied to the data from the Massachusetts Health Interview Survey to yield more useful information on needs assessment of the state's population.

- The Division began to offer a Health Risk Appraisal service to Massachusetts corporations, hospitals, and other institutions interested in developing inhouse health promotion programs.

- In collaboration with the Child Passenger Safety Resource Center, research staff conducted a statewide survey of car seat and seatbelt use among children. College students, working as field observers, recorded and analyzed the behaviors of nearly 1,800 child passengers at 11 project sites. They also identified the important relations between age and sex of the driver and passenger, and the use of seatbelts and car restraint systems.

- A study of over 300 clients of the hypertension control program found that patient follow-up and monitoring, when done in compliance with program protocols, yielded significant drops in sys-

tolic and diastolic blood pressures.

- A detailed study of public opinion regarding the control of cigarette smoking in public places was completed. The results indicated widespread public support for heightened measures that would further restrict smoking in public places.

### Preventive Health Services

The Division supported programs that identify, serve, and follow-up specific populations and occupational groups for whom the risks of chronic disease and disability are great. Four specific programs were operating in fiscal year 1983:

- *Lifestyle, the Public Employee Health Project*, a comprehensive health promotion program at the worksite, reached approximately 500 employees from 17 state agencies and three executive offices. Activities of the program, which were available to selected agencies in two downtown Boston locations, included a medical/physical assessment of health risks, lifestyle counseling, educational presentations and workshops, and exercise classes.

- *Resource Centers for Firefighter Fitness* were operating at Bridgewater State College (BSC) and the University of Massachusetts (UMASS) at Amherst. The BSC Resource Center entered its third year of operation; the UMASS Resource Center began its activities with the Amherst police and fire departments in January 1983. The Centers provided health-fitness testing, education, training and technical assistance in implementing fitness programs for public safety personnel. The establishment of the UMASS Resource Center made available statewide intervention at the worksite to improve levels of fitness of firefighters and police, thus reducing disability due to heart disease.



- *Comprehensive Community Hypertension Control Programs* were functioning in 11 communities. Agencies funded by the Division to provide services included community health centers, hospitals, visiting nurse associations, and local boards of health. Screening was carried out at both worksites and other locations in the communities. During fiscal year 1983, the projects screened 10,840 residents of the Commonwealth. Data indicated that 20.6 percent of the population screened had elevated blood pressures at the initial reading. The projects reached more minorities and persons with less than a high

school education than they had in previous years; 25.2 percent were nonwhite, and 27.8 percent of all persons screened had less than 12 years of schooling.

- *Women's Health Services* were expanded during the fiscal year. The Division funded eight rape crisis centers across the state that provided counseling services, advocacy, and public education programs in their communities. The Women's Health and Learning Center for incarcerated women held workshops and counseling sessions in such areas as substance abuse, women's health, childbearing, job skills and job readiness, and family violence.





During the fiscal year, the Division began to develop a curriculum for use in schools and community settings that would decrease the prevalence of family violence by increasing the abilities of persons to identify, and cope with, stress by constructive and nonviolent means.

### Health Promotion Services

- *The Child Passenger Safety Resource Center* played a major role in raising awareness of the serious health risks to children riding unrestrained in motor vehicles. The Resource Center trained health professionals, law enforcement officials, and persons in community organizations in the implementation of the child passenger safety law. Educational materials directed to specific groups were prepared and distributed statewide. During fiscal year 1983, the first statewide child passenger safety conference attracted 115 persons to its lectures, workshops, and exhibits.

- *The Massachusetts Nutrition Resource Center* continued to offer referrals and free information on nutrition to consumers and health professionals through a hotline and mail request service, which was expanded statewide by the establishment of a toll free 800 telephone number. During the fiscal year, consumer and provider contacts through the Nutrition Hotline increased by 65 percent over the previous year to more than 6,500; contacts through mail requests increased by 58 percent to approximately 2,300.

- *Diethylstilbestrol (DES) Campaign* was carried out in conjunction with the Division of Family Health Services. The activities of the Division of Preventive Medicine included the statewide distribution of educational materials, feature articles, and posters to libraries, women's organizations, and health care providers, and radio and television announcements. The mate-

rials informed the general public about the drug and urged persons exposed to seek diagnostic services.

- *The Media Resource Center* was established in fiscal year 1983 to bring together the skills required to develop effective public health education programs. The Division used the center to provide the consumer with accurate and dependable information on a number of health issues, including:

- *The Smoking Break*, Channel 22, Springfield. This step by step guide to quitting smoking was conducted by a news program personality in western Massachusetts. Approximately 2,000 viewers participated in the program and an estimated 30,000 smokers were reached.

- *Rape Prevention*. The Division supplemented its direct service efforts with a statewide public education campaign on the myths and values surrounding rape as a violent crime. Three public service announcements were produced for broadcast by television stations across the state.

- *Smoking Prevention and Cessation*. The Division funded two teacher-training programs to develop and implement tobacco

and alcohol abuse prevention programs. The Commonwealth Inservice Institute and the state teachers college programs involved almost 500 teachers statewide. During the fiscal year, the Division of Preventive Medicine and the American Lung Association cooperated in two major projects: a training program for health care providers who might intervene with their pregnant patients who smoke; and the development and publication of the *Non-Smokers' Guide to Massachusetts*. Designed to assist Massachusetts residents who are concerned about the quality of indoor air, the *Guide* lists restaurants that have nonsmoking areas, health care facilities with policies related to smoking, and insurance companies that offer discounts to nonsmokers.

### TUBERCULOSIS CONTROL

The Division of Tuberculosis Control has primary responsibility for the surveillance of tuberculosis in the Commonwealth, as well as for the development of programs to treat and control the disease.





Tuberculosis had been on a continual decline in Massachusetts from 1959 through 1980. Reported cases of tuberculosis, however, suddenly increased in mid 1981 through calendar year 1982, accounting for an increase of approximately 12 percent over 1980 (Fig. 2). The number of newly diagnosed cases reported by physicians in calendar year 1982 totaled 503, an increase of 51 over the 452 cases reported in 1980. The 1982 case rate also showed an increase from 7.8 per 100,000 population to 8.76.

The Division initiated new activities and strengthened continuing programs to reverse or prevent further increases in tuberculosis in the Commonwealth. New activities included:

- Implementation of the new tuberculosis surveillance system, which defines five Tuberculosis Surveillance Areas (TSA) covering every city and town in the state. A public health nursing advisor in each TSA coordinates, with the Central Case Register, all information among local boards of health, physicians, tuberculosis clinics, and hospitals.
- Testing a new automated Central Tuberculosis Case Register to replace the manually operated case register.
- Operation of a federal grant program, awarded to the Division because of the high prevalence of tuberculosis among refugees, to provide tuberculosis control services to the large refugee population in the state. The Division purchased outreach services and services of a bilingual interpreter to assist tuberculosis clinics and boards of health in the examination, treatment, and follow-up of refugees with the disease who do not speak English. The Division also conducted an inservice training program for bilingual workers and employees of local boards of health.

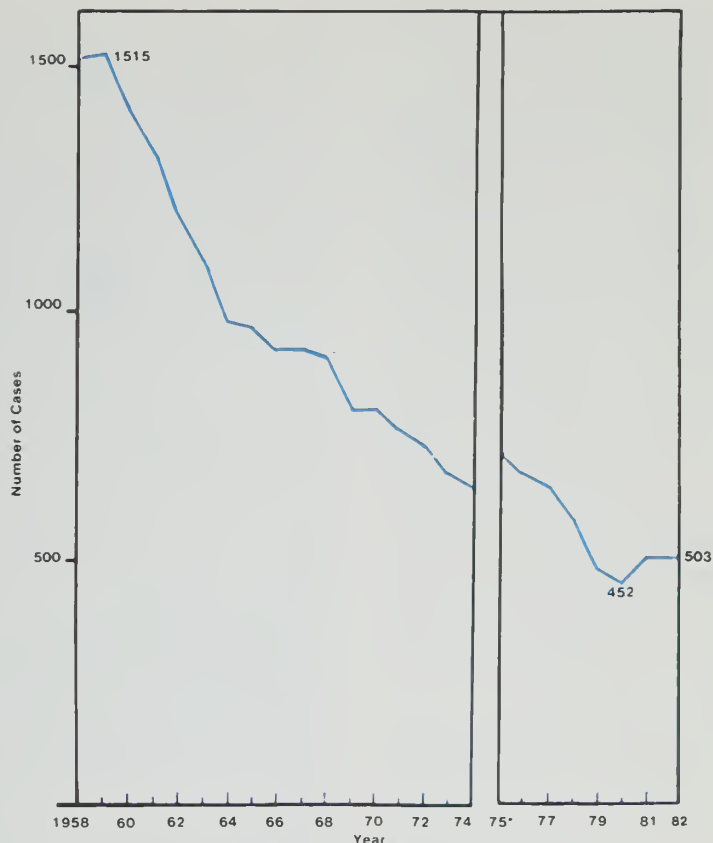


Figure 2. Number of Reported Cases of Tuberculosis in Massachusetts, 1958 - 1982.  
\*National Criteria for Reporting Tuberculosis Cases Change, January 1, 1975, Not a True Increase in Cases Over 1974.

- Conducting a Public Health Rounds on March 31, 1983, devoted to the health problems of refugees.
  - Cosponsorship of a program on September 16, 1982, at Lakeville Hospital to honor the 100th anniversary of the discovery of the tubercle bacillus by Robert Koch.
- During the fiscal year, the Division continued to provide the following services:
- A network of 10 inpatient and 32 ambulatory programs in community hospitals to make tuberculosis diagnostic and treatment services available and accessible to residents of every city and town in Massachusetts. Programs provided 3,512 hospital days of treatment and 23,418 outpatient visits.
  - Contractual purchase and distribution of tuberculosis drugs for treatment and preventive therapy through tuberculosis clinics.

- Contractual purchase and distribution of tuberculin-testing supplies for 200,000 tests through local boards of health.
- A central bacteriologic laboratory to provide statewide tuberculosis diagnostic and treatment-monitoring services to physicians. The laboratory processed 33,700 specimens in fiscal year 1983, an increase of 5.6 percent over the previous year.
- Maintenance of a manual statewide case register for the surveillance of tuberculosis, with a reciprocal exchange of information with states and the federal government. More than 1,000 patients were on the case register, in addition to 7,000 contacts of cases reported annually.

## DENTAL HEALTH

The Division of Dental Health, the responsible state agency for

the prevention and control of oral disease in Massachusetts, continued its work in these areas:

- *Prevention of Oral Disease* —

The Division continued to make great strides in promoting and improving the quality of fluoridation during the fiscal year. Funds from the Health Prevention Block Grant were used to assist fluoridation activities of the cities and towns. The Division purchased fluoridation equipment or compound for 18 communities that had initiated fluoridation during the past two years. Four communities, Lowell, Marlborough, Peabody and Lawrence, began fluoridating for the first time with equipment provided by the Division, which also purchased replacement equipment for cities and towns that had been fluoridating for a number of years so they could achieve optimum levels. Total approximate population of all communities assisted was 650,000.

In conjunction with the Division of Community Sanitation, the Division of Dental Health worked to improve the quality of fluoridation statewide. Four two-day training courses for waterworks personnel were held throughout the state; 126 water operators were trained. A laboratory proficiency-testing program was established to ensure the accuracy of testing done at the local level. Of the 6,000 fluoride test samples reviewed, the mean fluoride level statewide was 0.97 parts per million (ppm), the closest to the recommended optimum level for any given year.

During the year, seven boards of health, representing over 300,000 people (12 percent) of the state's nonfluoridated population, ordered fluoridation for their residents. Two orders went unchallenged and fluoridation will begin in 1984; three were challenged, went to referendum, and fluoridation was rejected. Springfield and Chicopee were expected to decide on fluoridation in the fall of 1983.

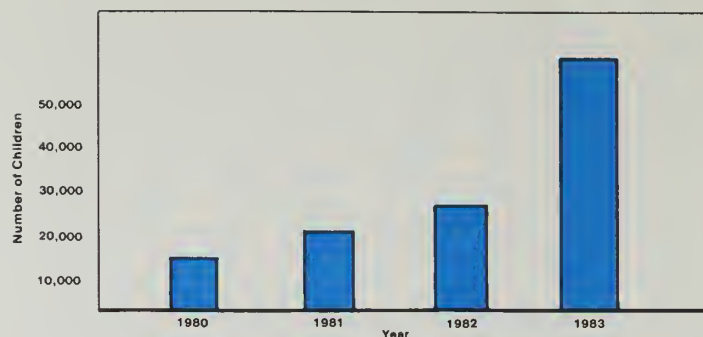


Figure 3. Number of children participating in the school fluoride mouthrinse program in Massachusetts, 1980 - 1983.

At the end of the fiscal year, 3.1 million Massachusetts residents were reaping the benefits of fluoridation. A potential savings of \$45 million in dental care costs was realized because of fluoridation's preventive effects.

Enrollment in the school-based Fluoride Mouth-Rinse Program, in its fourth year of operation, doubled to bring the total number of children to 60,000 and the number of communities to 87 (Fig. 3).

- *Dental Care* — The Division assumed responsibility for the dental care programs of the Division of Mental Retardation of the Department of Mental Health, and began providing dental services to persons with developmental disabilities who are either residents of the state schools, or community residents who are unable to obtain care from local dentists. It also operated a preventive dentistry outreach program that provided preventive care, case finding, and referral services for developmentally disabled persons served by community programs. A treatment fund was established to purchase care from community dentists for clients not eligible for Medicaid, or from specialized dental services not covered under Medicaid.

The Division contracted with Tufts University Dental Facility for the Handicapped for the provision of services at seven clinics located on the grounds of the state schools, the Hogan and Berry

Regional Centers, and a specialty inpatient service at the Shattuck Hospital.

During the fiscal year, 5,713 persons received services at one of the dental facilities. Of these patients, 68 percent were residents of the state schools. During the year, there were 24,028 patient visits, an increase of 5 percent over the previous year. The Division also incorporated a new, quality assurance and utilization review system to monitor and evaluate services provided at the dental clinics, and contracted with the National Foundation of Dentistry for the Handicapped to provide preventive care, case finding, and referral services for community clients.

The Division continued to work with the staff of the Department of Public Welfare to improve the professional review system for approval of dental service and supervised the dental consultant staff. The Division entered into agreement with the Department of Youth Services to provide care to residents of the Donnelly Youth Center in Roslindale, and worked with the Department of Public Health's Massachusetts Hospital School to revamp its dental program.

- *Training and Education* — With support from the Area Health Education Center in Worcester, the Division surveyed dental hygiene programs of the five community colleges and provided technical assistance in improving their continuing education curric-

ula. The Division continued to provide training in public health to residents and students of the Harvard Schools of Public Health and Dental Medicine.

- *Research and Demonstration* — The Division was awarded funds by the federal Office of Maternal and Child Health for two special projects to begin in 1984: to promote use of dental sealants for prevention of tooth decay among children, and to improve the ability of private dentists to care for developmentally disabled persons.

## DIVISION OF ALCOHOLISM

During fiscal year 1983, the Division of Alcoholism reviewed and evaluated how the block grant mechanism of disbursement of federal funds would facilitate one cohesive network of services in the state. By reducing the higher funding level of earlier federal projects and spreading dollars more evenly across the state, the Division was able not only to maintain most of the previous projects but to add six halfway houses, 11 outpatient programs, and one driver alcohol education program to the basic service system.

The issue of drunk-driving continued to receive major attention as a result of the passage of new legislation to increase penalties for second and multiple offenses. Changes were made in the Driver Alcohol Education Programs, especially in the Phase I model of care, to include a more intensive diagnostic evaluation and an after-care management for every client completing the program. The emphasis has now been placed on developing more individualized plans of treatment according to needs of clients, and referrals to existing outpatient and other approved facilities for treatment.

In a policy paper entitled, "Expanding Free-Standing, Inpatient Alcoholism Treatment Programs as an Alternative to Hospital-Based Programs," the Division supported the expansion of a system of free-standing, inpatient alcoholism treatment facilities, but only with the assurance that Blue Cross would recognize the reimbursement of free-standing settings. The paper reflected the Department's concern about cost control of health care.

During the fiscal year, the Division carried out the following activities:

- Funds for 36 projects for primary prevention and early intervention were made available. The amount allocated — \$1,372,771 — exceeded the minimum 20 percent commitment required for block grant funds.

- A major primary prevention effort, the "Prom Campaign," which focused on high school students, was expanded during the year. The Division also expanded its approaches to newspaper, television, and other forms of promotion. These included participation in the National Institute on Alcohol Abuse and Alcoholism media campaign for women and youth, use of the Goodyear blimp with the message, "Friends Don't Let Friends Drive Drunk," and billboard advertising on Massachusetts roadways with a message for women to help them develop skills in how to refuse to drink.

- The Division enhanced its commitment to underserved populations by funding the Community Training and Resource Center, a minority agency, to provide technical assistance, training, and education to agencies around minority issues. In addition, the Division allocated \$3,526,394 to fund 17 projects for youths, five programs to address the needs of the Spanish-speaking community, 26 women's programs, and special services for the elderly.

- The Division allocated over \$2 million to fund 34 special projects, among them, three short-term, intensive rehabilitation programs, and two public inebriate projects.

- The Division supported 22 detoxification centers for a total of 132,980 bed days, 55 halfway house programs for a total of 264,466 bed days, and 47 outpatient programs for a total of 54,279 individual and 35,359 group sessions. The Division also funded 28 driver alcohol education programs for a total of 14,500 service units. These clinical services, combined with the efforts of the eight regional primary prevention centers and the 34 special projects, brought secondary and tertiary alcoholism services to approximately 100,000 persons.

## DIVISION OF DRUG REHABILITATION

The Division of Drug Rehabilitation, established by legislative action in 1963, was formally returned to the Department of Public Health from the Department of Mental Health in 1982, after an absence of 12 years. The move was a response, in part, to the recognition of the appropriateness of locating the state's drug abuse and addiction treatment and prevention agency in a public health environment.

The Division has historically funded a variety of treatment modalities and prevention services, which fall into six categories:

- *Residential Detoxification Services*, which provide detoxification to the addicted person whose addiction is such that detoxification poses a medical risk.

- *Outpatient Methadone Detoxification*, a short-term service (21 days) offered to the opiate-addicted to prepare them for continued, preferably drug-free, treatment.



- *Outpatient Methadone Maintenance*, a service to the opiate addict who requires chemotherapy beyond the 21-day detoxification, as well as a structured counseling program.

- *Residential Drug-Free Treatment*, for persons unable to remain drug-free while residing in the community, and who need a long-term, highly structured, goal-oriented rehabilitation program.

- *Outpatient Drug-Free Counseling Services*, for drug dependent or abusing persons who can benefit from regularly scheduled counseling services to help them maintain a drug-free life style.

- *Preventive Services*, a wide range of activities designed to prevent persons from moving along a continuum of risk.

- *Special Projects*, such as counseling for the incarcerated, vocational education, and day treatment.

In its transitional year, the Division has accomplished two major goals: the development of a centralized fiscal and administrative capability, and the maintenance of the existing network of treatment and prevention services. In 1983, the Division conducted a statewide Request for Proposals for purchase of service dollars. Programs were selected on the basis of quality of the proposal, distribution of services throughout the state, cost effectiveness and commitment to stability and continuity in current levels of basic services. The process allowed the Division to begin an accurate and informative data base necessary for maintaining a comprehensive delivery system of high-quality services.

As the fiscal year 1983 came to a close, the Division of Drug Rehabilitation looked forward to working with providers and interested citizens to alleviate the human damage resulting from

substance abuse and addiction, and to promote a healthful freedom from drug abuse, dependency, and addiction.

## COMMUNITY HEALTH CENTER SERVICES

In fiscal year 1983, the legislature appropriated \$1 million in new funds for the operational support of community health centers, which provide comprehensive primary health care to a defined service-area population. Included in the appropriation was funding to support the cost to the Department of administering the new program. The Office of Community Health Center Services was established with a dual purpose: to plan, implement, and manage the community health centers' grants program; and to develop and coordinate departmental policy affecting community health centers with other governmental and provider organizations.

In fiscal year 1983, the Massachusetts League of Community Health Centers (MLCHC) reported 70 such organizations across the state. After consultation with MLCHC, the Department issued a Request for Proposals to the 70 community health centers under the new grants program. Forty-seven applied for funds and 37 were funded. Programs funded fell into one of five categories: dental services, obstetrics and gynecology, pediatric and adolescent care, social services, and primary care.

## REGIONAL HEALTH OFFICES

The scope of activities of the Department is reflected in the local health services provided by the four Regional Health Offices in the state. These offices coordi-

nate the Department's general field activities and act as intermediaries between central service programs, local health agencies, and citizen groups. As representatives of the Commissioner, the regional health officers inform the Department of the local political, demographic, and social changes in, as well as the health needs of, their regions.

To the extent that resources were available, regional staff carried out their multifaceted activities and responsibilities. These can be summarized as follows:

- *Technical assistance* — for sanitary programs and consultations on nursing, social work, and nutrition programs.

- *Regulatory* — application and regulations of the State Sanitary Code and Food and Drug laws; inspection of prisons and certification of migrant labor and recreational camps.

- *Direct patient services* — the provision of either direct services or contracts with other medical agencies. These activities include the programs of the Services to Handicapped Children, rehabilitation programs, family planning, and other programs of the Divisions of Family Health Services, Preventive Medicine, and Dental Health.

- *Inservice educational programs* — for local nurses, sanitarians, nutritionists, physical therapists, social workers, and members of local boards of health.

During fiscal year 1983, the Regional Health Offices made great strides not only in working more closely with local boards of health, but also in organizing new health promotion programs and in planning and promoting a greater sharing of regional resources. Examples from each region indicate the diverse activities of all the Regional Health Offices:

- *Central Region* — Lead paint inspectors carried out the following activities: screenings, 292; housing inspections, 154; reinspections, 345; inspections of day care centers, 12; houses deleaded, 47; court appearances, 110; educational seminars, 2. Only one child with elevated blood-lead levels was hospitalized during the fiscal year, a concrete example of the effectiveness of the lead paint poisoning prevention program. Thirty-five communities, an increase of seven over the previous year, participated in the Fluoride Mouth-Rinse Program, which reached 12,709 school-age children in 63 schools.

- *Northeastern Region* — The specialized clinics in the network of Services to Handicapped Children, as well as contracted programs and case management services, continued to make a range of services available to children and families at risk. The clinic population declined in fiscal year 1983 as a result of continuing efforts to discharge patients over 18 years of age, and of fewer referrals to the cardiac and orthopedic clinics. Scoliosis clinics, however, exceeded capacity; new clinics were being scheduled to meet the increased demand. In addition to staffing all clinics, five social workers made 200 home visits, attended about 20 core evaluations under Chapter 766, and made approximately 55 contacts with other human services agencies.

- *Southeastern Region* — With the transfer of the Case Management Services Unit from the Office of Children to the Department of Public Health, the southeastern Regional Health Office added five more employees to its staff to handle a caseload of over 900 children with varying degrees of handicaps. An occupational therapist and a sanitarian were also added to the office to handle the many requests for assistance. Working with the

other regional health offices and the Division of Preventive Medicine, staff began to develop a set of model standards for local boards of health. The standards were intended to help the Department measure the capability of local boards to deliver services of high quality.

- *Western Region* — The model Quabbin Health District successfully completed its third year, with the Regional Health Officer acting as liaison for the Department and as contract monitor. Formed by the Towns of Belchertown and Ware in 1980, the District formally added the Town of Pelham after approval by its June 1983 Town Meeting. Funded in part by the Department, the Quabbin Health District completely fulfilled its contracted obligations, including certification and operation of a laboratory in Ware, which began testing water samples (total and fecal coliform counts) from surrounding towns.

## COMMUNICABLE/ VENEREAL DISEASE CONTROL

The Division of Communicable and Venereal Diseases carries out the health protection activities that are the direct responsibility of state government. These encompass health surveillance and disease control to guard the health of the people of the Commonwealth through testing, vaccination, treatment, analysis of disease trends, and the assessment of threats to the population.

## COMMUNICABLE DISEASE CONTROL

The statewide immunization programs of the Department, which expanded as new vaccines became available, continued to

record progress in controlling measles, mumps, and rubella:

- *Measles* — Four cases of measles, all of which were imported, were reported in calendar year 1982. Massachusetts is now measles free.
- *Rubella* — Two cases of rubella, one indigenous and one imported, were reported in calendar year 1982. By the end of calendar year 1983, Massachusetts was expected to be rubella free.
- *Mumps* — Seventy-five cases of mumps were reported in calendar year 1982. During the six-month period of January through June 1983, 17 cases were reported. Massachusetts was therefore not expected to be mumps free until the end of calendar year 1984.

The Department will be able to maintain this record as long as it continues to immunize 100,000 children each year with the measles/mumps/rubella (MMR) vaccine. The program of immunization has not only prevented illness and death, but has saved the Commonwealth over \$19 million annually in actual costs for medical care and institutionalization of patients.

Massachusetts, which has been on a maintenance immunization program against polio since polio vaccine became available, is also polio free. The last case of reported polio was in 1968. The Commonwealth will continue to be polio free as long as the Department administers 450,000 doses of trivalent Sabine oral polio vaccine annually. The annual immunization survey of children (65,958) entering kindergarten in September 1982 showed more than 98 percent had already received three or more doses of polio vaccine. The percentage of these children immunized against polio and the six other immunizable diseases

**Table 6.**  
Percentage of Immunized Children Entering Kindergarten  
1974 - 1983.

|         | 1973-74 | 1974-75 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | 1982-83 | Percent Increase Over 1973-74 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------------------------|
| DTP*    | 88.6    | 93.51   | 95.04   | 96.21   | 95.82   | 96.99   | 97.57   | 98.10   | 97.88   | 98.37   | 11.03                         |
| Polio   | 86.2    | 92.04   | 94.10   | 95.84   | 94.25   | 97.50   | 97.95   | 98.13   | 97.71   | 98.07   | 13.77                         |
| Measles | 90.3    | 93.53   | 94.60   | 96.21   | 98.32   | 98.60   | 98.86   | 99.09   | 98.82   | 99.07   | 9.71                          |
| Mumps   | 59.3    | 69.19   | 78.00   | 84.56   | 89.83   | 92.79   | 98.69   | 99.06   | 98.79   | 99.06   | 67.05                         |
| Rubella | 62.0    | 70.41   | 78.51   | 84.55   | 90.04   | 93.32   | 98.67   | 99.06   | 98.79   | 99.06   | 59.77                         |

\*DTP - Diphtheria, Tetanus, Pertussis (Whooping Cough).

showed impressive increases over 1973 (Table 6).

During the 1982-1983 school year, the Division of Communicable and Venereal Diseases also surveyed more than 90,000 school health records of new children entering grades one to 12 in both public and private schools in all 595 school systems. Immunization levels for these children were: DTP, 95.62 percent; polio, 95.70 percent; measles, 96.76 percent; mumps, 90.36 percent; and rubella 91.14 percent. The Division continued its survey of children (71,097) in day care centers and found substantial increases over the previous years (Table 7).

Influenza activity during the 1982-1983 season was moderate in Massachusetts. During the fall of 1982, the Division distributed 215,000 doses of influenza vaccine

for use among high-risk groups, especially senior citizens and other persons, regardless of age, who had a chronic disease. An unprecedented 206,532 high-risk persons were reported immunized through the Division's network of providers. As in the past two years, the influenza vaccine was well tolerated, and no reports of adverse reactions were received. Most of the cultures isolated were A Bangkok, although there were some B Singapore toward the end of the flu season.

Despite the availability of the pneumococcal pneumonia vaccine since 1978, pneumonia and influenza deaths remained a cause for concern. Nationwide, pneumonia and influenza-related deaths exceeded the expected threshold for a record number of 15 weeks. Preliminary data from the Department, however, indi-

cated a substantial decline in the pneumonia and influenza mortality rate for Massachusetts as compared to the rate during the 1980-1981 flu epidemic year.

During fiscal year 1983, seven cases of babesiosis, a malaria-like illness, were reported: five from Nantucket, one on Martha's Vineyard, and one from Barnstable.

Lyme disease, caused by the bite of an infected deer tick, has been appearing on Cape Cod and the Islands. Last year, seven cases were reported from Essex County.

## **VENEREAL DISEASE CONTROL**

In accordance with national standards, the Division of Communicable and Venereal Diseases has concerned itself with the 16 sexually transmitted diseases, but

**Table 7.**  
Percentage of Immunized Children in Day Care Centers  
1975 - 1983.

|         | 1975-76 | 1976-77* | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | 1982-83 | Percent Increase Over 1975-76 |
|---------|---------|----------|---------|---------|---------|---------|---------|---------|-------------------------------|
| DTP**   | 86.73   | —        | 90.99   | 94.23   | 95.60   | 95.94   | 96.29   | 96.77   | 11.58                         |
| Polio   | 85.71   | —        | 89.83   | 94.91   | 96.13   | 96.70   | 96.87   | 97.52   | 13.78                         |
| Measles | 89.31   | —        | 93.22   | 95.83   | 96.79   | 97.54   | 97.83   | 98.11   | 9.85                          |
| Mumps   | 77.27   | —        | 85.93   | 92.78   | 96.28   | 97.29   | 97.79   | 98.07   | 26.92                         |
| Rubella | 76.00   | —        | 85.36   | 92.46   | 96.27   | 97.31   | 97.77   | 98.03   | 28.99                         |

\*No survey had been conducted in 1976-77.

\*\*DTP - Diphtheria, Tetanus, Pertussis (Whooping Cough).



since 1981 it has added a new disease — Acquired Immune Deficiency Syndrome (AIDS). Of these diseases, eight — gonorrhea, nongonococcal urethritis, trichomonas vaginitis, monilial vaginitis, genital herpes, genital warts, scabies and AIDS — are epidemic in Massachusetts and in the nation. Massachusetts had one and one-half cases of male nongonococcal urethritis to one case of male gonorrhea, whereas, nationally, the incidence of both diseases was the same. Genital herpes continued to comprise 3 percent of the total number of clinic visits. The epidemic of the disease, which had begun in the late '60s and '70s, reached a plateau through December 31, 1982.

The 10,472 cases of gonorrhea reported in calendar year 1982 represented an increase of 1.5 percent over the previous year (Fig. 4). Gonorrhea continued to be the number one communicable disease in the state.

For calendar year 1982, the reported number of cases of all stages of syphilis was 987, an increase of 1.2 percent over the 975 cases in the previous year. Cases of primary and secondary syphilis accounted for nearly 39 percent of the cases (Fig. 5). An important factor in the Division's efforts to control the disease was the syphilis interview-contact-tracing procedure, used by the Division's staff in the 18 cooperating state venereal disease clinics with 93 percent of the 649 early syphilis cases reported to the Department of Public Health. A total of 1,389 sexual partners of infected patients were found through the interview process. Of this number, 86 were found to be infected with the disease, 615 were recipients of epidemiologic treatment, and 256 were determined to be not infected, or previously treated for the disease.

The federal grant for venereal disease control was renewed for \$426,800 for 1983. Main emphasis

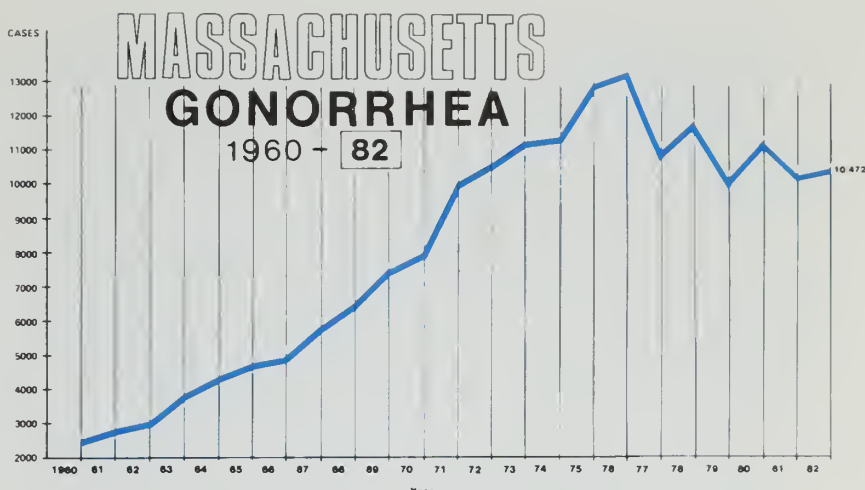


Figure 4 Cases of Gonorrhea in Massachusetts, 1960-1982

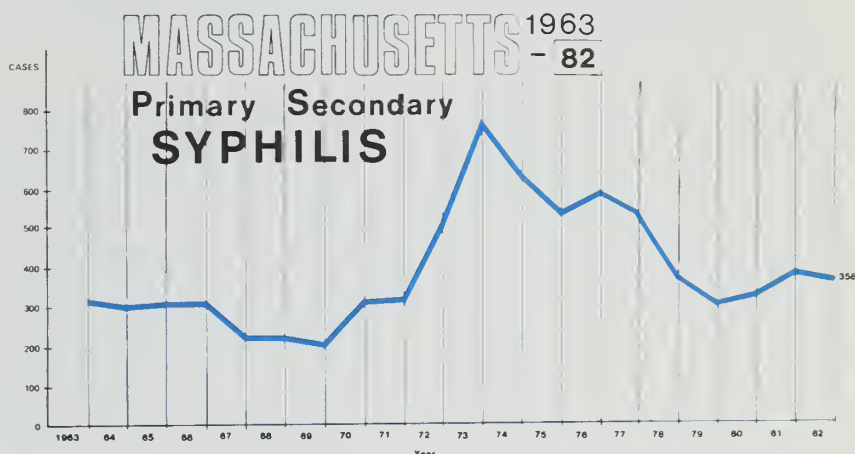


Figure 5 Cases of Primary and Secondary Syphilis in Massachusetts, 1963-1982

was on the screening of asymptomatic women for gonorrhea, and the refinement of an effective initiative for gonococcal pelvic inflammatory disease (PID). During calendar year 1982, the program examined 113,592 women for gonorrhea at approximately 100 participating facilities. Of the 113,592 women examined, 4,281, or 3.7 percent, approximately the same percentage as in the previous year, were found to have the disease.

The Division continued its program for the diagnosis, treatment, and epidemiology of PID, which have become vital aspects of gonorrhea control. A survey of 35 Massachusetts hospitals indicated that the gonococcus is the causative agent in approximately 18 percent of the PID cases diag-

nosed. Protocols with standards for the diagnosis of gonococcal PID, which had been established by the Division, continued in over 30 hospitals located in areas of highest incidence. Measures for ensuring the rapid epidemiologic follow-up of contacts, many of whom were asymptomatic men, were maintained. During calendar year 1982, 408 cases (a 14 percent increase over 1981) of gonococcal PID were reported. They represented 14 percent of the 3,543 reported cases of gonorrhea in women.

The incidence of penicillin-resistant gonorrhea increased by a dramatic 1300 percent in 1982, when 98 cases were reported as compared to a previous high of seven cases in 1981. The majority of cases, thus far, have been linked

to prostitutes and their contacts located in Boston and adjacent communities. Intensive epidemiologic measures have been applied to prevent the spread of such cases throughout the state.

The 18 cooperating venereal disease clinics in the outpatient departments of general hospitals had 41,082 patient visits for examination and treatment during the fiscal year. The cost, which included diagnosis, laboratory work, and treatment, was \$18.76 per patient visit.

Although the number of cases of acquired immune deficiency syndrome (AIDS) has increased greatly in the last two years, the cause of the disease remains unknown. Institution of preventive measures has, therefore, been compromised. The Department has, however, instituted a statewide surveillance system that requested physicians and hospitals to report voluntarily all suspected cases of AIDS. Reports were forwarded to the Centers for Disease Control for further analysis and follow-up. The Division of Communicable and Venereal Diseases has maintained a close relation with the homosexual and Haitian communities, health providers, the Red Cross, and other concerned organizations to deal with this serious public health problem. Sixteen confirmed cases of AIDS were reported in the state through calendar year 1982.

As part of its continuing effort to halt the spread of venereal diseases in the Commonwealth, the Division provided training in venereal disease control to 218 medical students from the Boston University and Tufts University Schools of Medicine.

## HOSPITALS

Through the operation of its six public health hospitals, the Department has been able to sup-

plement existing resources on a statewide basis and to assume special responsibilities to ensure comprehensive health care to the community. The role of the public health hospitals in the overall delivery of health care in the Commonwealth remained a matter of discussion during fiscal year 1983. Although many services once provided only by these hospitals have been absorbed by the private sector, the hospitals, in general, continued to provide a broad range of services to meet the needs of their patients. New programs stressed health promotion, as well as the prevention of the occurrence and progression of disease and disability.

The services and programs of the six public health hospitals are summarized below.

- **Lakeville Hospital** — A 100-bed chronic disease rehabilitation facility in the southeastern region of the state, Lakeville Hospital worked to expand admission referral sources for both inpatients and outpatients. The greatest results were in the admission of pediatric inpatients, which rose to 171 in fiscal year 1983, a 25 percent increase over the previous year. Total adult admissions were down 5 percent from the previous year, but adult surgical admissions were 11 percent higher than in the previous year. The increase in total inpatient admissions was over 9 percent higher than in fiscal year 1982, a situation necessitating the reopening of a nursing unit that had been closed in the previous year because of budgetary cutbacks. The unit has been designated for "progressive care" for more independent long-term patients and short-term surgical patients. The special designation allowed for reduced staffing and the most efficient use of the unit.

The addition of a physician to the medical staff, as coordinator of the Outpatient Department, has helped to expand and coordi-

nate all outpatient activities. Total outpatient visits increased by 9 percent in fiscal year 1983. During the year, the Outpatient Department held two screening clinics — one for hypertension and one for oral cancer — as part of the hospital's health promotion/disease prevention programs for the public. Both clinics were well attended.

- **Lemuel Shattuck Hospital** — Located in the Jamaica Plain section of Boston, the Lemuel Shattuck Hospital serves the acute and long-term needs of patients without access to other facilities. In November 1982, the Department and the hospital initiated a strategic planning project to define the appropriate role for the Lemuel Shattuck Hospital in the 1980's. The study found the hospital and its programs to be necessary, cost-effective, and of high quality, and recommended that the hospital increase its capacity to 325 beds to handle unmet needs of the community.

In fiscal year 1983, the Shattuck continued to provide high-quality health care to both inpatients and outpatients. During the year, the hospital reached its highest census level in 10 years — 95.6 percent. The hospital's special unit served 90 percent of the Department of Correction's medical and surgical needs. Plans for the expansion of the unit, the only one of its kind in the state, were completed during the year. The Bay Cove Mental Health Unit, which had moved to the Shattuck in the previous fiscal year, expanded to a third unit, increasing the overall capacity to 75 beds. The initial move of the unit to the Shattuck and its subsequent expansion have resulted in a greatly improved quality of care to both acutely and chronically ill patients from the South Cove, South Boston, Columbia Point, and North Dorchester sections of Boston, which had been underserved.



The Outpatient Department experienced a 28 percent increase in utilization during the past year. Its 23 specialty clinics provided a full range of services, including dentistry, chronic care, pain and stress, psychiatry, and tuberculosis treatment, for a total of 24,000 visits. Approximately 500 physical examinations were provided to State Police through the Outpatient Department.

The Shattuck's program of providing shelter to the homeless grew from only two guests on January 24, 1983, to 153 in March. The hospital served 9,308 nutritious meals to the homeless in one month alone. The Shattuck carried out its mission to care for the homeless at about a third less than the cost of the institution with the next lowest cost per day.

• **Massachusetts Hospital School** — Located on 160 acres in Canton, the Massachusetts Hospital School is a unique facility that provides comprehensive medical, educational, and restorative services to physically handicapped but intellectually able children. The Hospital School continued to provide a wide range of clinical services — orthopedic, cardiology, cerebral palsy, Milwaukee brace, myelodysplasia — to both inpatients and outpatients from the surrounding communities. Within the resources allocated by the Commonwealth, each young patient received highly individualized services. The Hospital School staff worked to provide a warm, nurturing, and stimulating environment to encourage growth of the handicapped child into a well-adjusted adult.

To this end, the Interdisciplinary Program begun at Baylies Cottage has been extended to all seven residential units. The Student Independent Living Experience, which gives young adults with handicaps the opportunity to experience both the joys and difficulties of living independently,



Gov. Dukakis greets guest at opening of shelter for the homeless at the Shattuck Hospital.

remained unique in the United States. The program was featured at the meeting of the National Association of School Hospital Administrators, hosted by the Massachusetts Hospital School in October 1983.

During fiscal year 1983, the Hospital School provided service to approximately 110 resident children, 15 day students, 700 patients in the Outpatient Department, and 60 preschoolers in three programs. Housing for the handicapped, funded by Chapter 689 and operated by the Canton Housing Authority, was begun on a five-acre plot of land adjacent to the Hospital School that was donated by the Board of Trustees.

The Recreational Complex for the Handicapped, dedicated in the spring, is fully accessible to anyone with a disability. The complex has become the center of recreational activities not only for the Hospital School's patients but for many others currently denied access to recreational programs.

• **Rutland Heights Hospital** — Located in the rural central Massachusetts community of Rutland, the Rutland Heights Hospital continued to offer a wide range of regional and statewide specialty programs for adults. The main hospital operated a total of 110

beds and provided both inpatient and outpatient services, with special emphasis on the needs of the geriatric patient. Comprehensive programs for rehabilitation, chronic diseases, and long-term care were available. As part of its program of prevention, the hospital maintained an Adult Day Care Program, providing medical, nutritional, social and recreational support to clients who might otherwise require placement in an institution.

The hospital's 30-bed Alcohol Rehabilitation Program continued to provide medical treatment, psychological evaluations, individual counseling, and social services to persons voluntarily seeking treatment.

Since its inception in October 1982, the 14-day residential Alcohol Treatment Program, an alternative to a mandatory minimum seven-day jail sentence, has expanded to 131 beds and has admitted over 1,000 clients. The program's objective is to ameliorate the problem of drinking and driving, and to reduce the number of highway accidents and deaths.

• **Tewksbury Hospital** — Tewksbury Hospital in the northeastern region of the state, with a bed capacity of 820, is the largest chronic disease, rehabilitation



hospital in Massachusetts. It also operates a 225-bed program for homeless men, most of whom are alcoholics. During fiscal year 1983, approximately 350 men were admitted into the program. Fourteen men asked for referrals to halfway houses or other special intensive treatment centers for alcoholism in the community. Ten men were given assistance and succeeded in entering such programs.

The Physical Medicine Rehabilitation Committee continued to expand its services to the hospital. Under a newly developed policy, all new patients were assessed by the committee and assigned to the proper therapy unit. A program in biofeedback was presented by a graduate student from the University of Lowell. The patients who participated in the six-week program showed improvement in stress reduction and pulmonary function.

During the year, Tewksbury Hospital transferred a parcel of land to the Department of Mental Health for the development of an intermediate care facility for the mentally retarded. The action was

another example of the long cooperative relation the hospital has maintained with other state agencies.

• **Western Massachusetts Hospital** — Located on 196 acres of land in Westfield in Hampshire County, the Western Massachusetts Hospital continued to provide inpatient and outpatient services to both adults and children, respite care for both adults and children, and day care services.

During fiscal year 1983, the Coma Unit was expanded from 20 to 34 beds. The Palliative Care Program continued to grow in scope through the addition of a volunteer program and the recruitment of a medical director for the unit. The average daily census in this program grew from 12 to 16 patients. The special Pediatric Summer Respite Care Program, which offers two weeks' respite for families of handicapped children, was again filled to capacity. The Adult Respite Program experienced a 54 percent increase in admissions.

The hospital's outpatient clinics offered a wide range of services to

high-risk groups, underserved populations, and clients of other state agencies. Other services included preemployment physical examinations for Civil Service applicants; preinduction examinations for inmates of county jails and houses of correction, for state and local police and firemen; annual toluene screening and lead poisoning tests for employees of the Department of Public Works; and evaluation and treatment program for school-age children with special needs. Outpatient visits increased by 33 percent over the previous year.

Over the past few years, the hospital has made serious efforts to use outlying buildings on the hospital grounds. During the fiscal year, the hospital reached its goal of filling all available space. Some of the agencies located in the Human Services Building were: Alcoholism Services of Greater Springfield, Inc., which provides a short-term inpatient alcoholism rehabilitation program and a Driving While Intoxicated Program, funded by the Department's Division of Alcoholism; Center for Human Development, Inc.,



Former coma patient leaving Western Massachusetts Hospital after many months of therapy.

which maintains an area office to coordinate a children's emergency services program in the Westfield area; an area office for the Department of Mental Health, and a regional office for the Office for Children.

During fiscal year 1983, the Department's six public health hospitals admitted 3,806 patients, an increase of 7.6 percent over the previous year. The average length of stay varied from 22.6 at the main section of the Lemuel Shattuck to 1,311.8 days at Tewksbury. The outpatient visits — 44,414 — represented a decrease of 1,340 from 1982, a reflection of the closing of the Outpatient Department at the Rutland Heights Hospital (Table 8).

The hospitals continued to expand training of physicians and paramedical personnel as part of the Department's total public health effort. Lemuel Shattuck, Tewksbury, and Western Massachusetts Hospitals graduated 86 practical nurses from their accredited schools of practical nursing. Many of the nurses continued to work at the hospitals.

## HEALTH REGULATION AND PLANNING

The Department carries out its mandate — "To maintain, protect and improve the health and well-being of the people" — not only through its hospitals, laboratories, and programs of direct services, but also through programs that aim to ensure all sections of the population safe health care. The Department also has responsibility for preventing unnecessary expansions or renovations of health care facilities that add to health care costs in the Commonwealth.

## HEALTH CARE QUALITY

The Division of Health Care Quality has the responsibility to ensure high-quality preventive, curative, and rehabilitative health care at reasonable cost. Its program of quality control encompasses a health care system of

hospitals, nursing homes, rest homes, chronic renal dialysis units, ambulance services, clinical laboratories, clinics, blood banks, home health agencies, state schools and community-based intermediate care facilities for the mentally retarded. In fiscal year 1983, the Division licensed or certified over 1,900 facilities or services as part of its overall efforts to establish and enforce minimum standards of care.

Restoration of funding lost during the previous fiscal year helped the Division to begin inspection of ambulance services for compliance with advanced life support regulations. These regulations determine what advanced procedures, such as intubations, intravenous injections, defibrillations, and electrocardiograms, can be carried out by paramedics, cardiac, and intermediate emergency medical technicians. Another new activity has been the licensure of clinical laboratories to ensure that tests are carried out by properly trained staff and that accurate results are reported to physicians to aid diagnosis and treatment.

The restored funds also allowed

**Table 8.**  
Public Health Hospitals  
Annual Census Summary    July 1, 1982 - June 30, 1983.

| HOSPITALS             | ADMISSIONS   | DISCHARGES   | DAYS           | STAY     | CENSUS   | VISITS        |
|-----------------------|--------------|--------------|----------------|----------|----------|---------------|
| Lakeville             | 362          | 360          | 32,395         | 104.8    | 88.8     | 9,790         |
| Lemuel Shattuck       |              |              |                |          |          |               |
| Main                  | 1,570        | 1,577        | 33,756         | 22.6     | 92.5     | 23,647        |
| Medical Geriatric     | 47           | 52           | 17,701         | 974.5    | 48.5     | 12            |
| Bay Cove              | 463          | 453          | 22,782         | 31.4     | 62.4     | 292           |
| Mass. Hospital School | 139          | 137          | 24,865         | 348.4    | 106.9*   | 1,419         |
| Rutland Heights       | 326          | 323          | 36,967         | 146.2    | 101.3    |               |
| Tewksbury             |              |              |                |          |          |               |
| Main                  | 245          | 222          | 258,881        | 1,311.8  | 709.3    |               |
| Homeless Men          | 333          | 350          | 62,301         | 140.6    | 170.7    |               |
| Western Mass.         | 321          | 370          | 29,613         | 70.1     | 81.1     | 9,254         |
| <b>TOTAL</b>          | <b>3,806</b> | <b>3,844</b> | <b>519,261</b> | <b>—</b> | <b>—</b> | <b>44,414</b> |

\* Average daily census at the Massachusetts Hospital School has been adjusted to reflect enrollment days.



the Division to begin full inspection of clinics and hospitals and timely inspections of rest homes. Under contract with the Department of Public Welfare, the Division resumed its "Inspection of Care" process to examine the quality of care received by Medicaid patients. The Division also regained responsibility for the administrative functions of the Board of Approval and Certification of Physician Assistant Programs, which certifies all such programs in the state.

Patient abuse continued to be a problem. During the fiscal year, the Division investigated 236 separate complaints of abuse, mistreatment or substandard care of patients at the facilities it licenses and regulates, and submitted reports of 81 justified complaints to the Office of the Attorney General. In addition, the Division responded to eight emergencies when patients' health and safety were in jeopardy. Emergency action included the appointment of nursing home receivers in one case; procurement of protective court orders in conjunction with the Attorney General in five cases; and assistance in the transfer of 349 patients from six grossly deficient long-term care facilities. The Division initiated licensure revocation actions against six unsuitable operators of long-term care facilities, and Medicaid decertification against 10 substandard nursing homes. It also recommended Medicare decertification of three substandard hospitals and two clinical laboratories.

To make more effective use of resources, the complaint investigation process was streamlined. A new reporting system reduced the processing time by approximately 30 percent and assured immediate response to complaints involving jeopardy of patients or major policy concerns. The Division also established comprehensive procedures for the development, handling, and processing of all

enforcement cases.

New regulations, promulgated in December 1982, established criteria for review of the suitability of long-term care licensees, including persons convicted of a felony involving Medicaid fraud. Other accomplishments of the Division included:

- Convening a Birth Center Task Force to assist with the development of policies regulating birth centers. Based upon the task force's recommendations, the Division prepared draft regulations for a series of public hearings early in the next fiscal year.

- Promulgation of regulations that require long-term care facilities to provide patients with readily accessible, locked personal storage space and telephone services that ensure privacy and easy access for the handicapped.

- Convening a Pediatric Advisory Committee of consumers, physicians, and other professionals to aid in developing guidelines for licensure of pediatric services in hospitals, and in designing the services by level of care.

- Approval received for a project to use a new methodology to reduce surveyor's time in inspection of care of Medicaid patients in long-term care facilities.

- Approval received for two special projects to provide additional funds to psychiatric nursing homes for enriched staffing to improve patient care.

## **DETERMINATION OF NEED**

Under the provisions of the Determination of Need (DON) Law, the Department of Public Health is responsible for analyzing the need for, and cost-effective allocation of, health care facilities in the state. Through the DON Program, the Department works to prevent unnecessary building of new facilities or expansion of

existing facilities to avoid wasteful duplication of services and facilities, which contributes to spiraling health costs and reduces the quality of services.

During fiscal year 1983, an increase in the budget enabled a gradual and partial restaffing of the program, which had been drastically cut in the previous year. Thus, by the end of fiscal year 1983, the backlog of DON applications was reduced. Applications ranged from several large proposals for hospital expansion to numerous smaller projects eligible for "delegated review." The "delegated review" process, which became fully operational in fiscal year 1983, expedites smaller projects with limited effect upon cost or health service organization by allowing the Commissioner to approve applications for such projects without review by the Public Health Council.

The DON Program made considerable progress in implementing the new policies recommended by the Senate Post Audit and Oversight Committee and the Governor's Health Care Cost Containment Coalition in the previous fiscal year:

- After careful analysis, the DON Program examined the feasibility and implications of a health care budgeting system. Such a process would establish statewide health care priorities, rank the applications submitted, and review them according to "affordability." The Department has submitted legislation to provide statutory clarification of this important issue.

- Working closely with the Rate Setting Commission, the DON Program altered its method of review to allow a closer look at total operating costs rather than at only the "bricks-and-mortar" costs associated with DON applications. The new orientation has presented a more accurate picture of the costs and benefits of projects.

- Basing itself on new legislation that raised the threshold for applications and reduced the number of annual filing dates from three to one for the most costly proposals, the DON Program formulated policies and procedures to clarify the process.

The DON Program worked closely with the Office of State Health Planning and the Rate Setting Commission on these issues. In so doing, it greatly increased communication and coordination among the agencies.

## EMERGENCY MEDICAL SERVICES

The Office of Emergency Medical Services (OEMS) passed its tenth anniversary in January 1983 as the state's lead agency charged with planning, developing, and monitoring a system of emergency medical care in the Commonwealth. Working with regional and area groups, providers and consumers, OEMS has, during the past decade, effected dramatic improvements in EMS care to residents of and visitors to the state.

In November 1982, revised regulations (Governing Ambulance Services and Coordinating Emergency Medical Care) were promulgated by the Public Health Council. Among the major features are standards for advanced life support (ALS) ambulance services, and provisions for departmental designation of regional EMS. Progress was made to implement the regulations in cooperation with the Division of Health Care Quality. Important implementation steps taken by OEMS were:

- Designation of four regional EMS councils and the interim designation of two regional EMS councils after intensive review of six applications for designation. Each council was awarded one year's funding from the Preventive Health Block Grant.



- Certification by the Department of 105 emergency medical technicians (EMT)-intermediates and 110 EMT-paramedics, the first group of ALS personnel whose credentials and training allowed immediate certification.

- Establishment of administrative guidelines governing training and recertification standards for the three levels of ALS personnel: EMT-intermediate, EMT-cardiac, and EMT-paramedic.

Other developments in EMS acted upon by OEMS included:

- Completion of training programs for more than 100 EMT-instructor/coordinators and examiners.

- Providing analysis to the DON Program for two DON applications for hospital-based ALS programs, which were approved by the Public Health Council.

- Sponsorship of two symposia for EMS personnel — Emergency

Problems in the Elderly, and Emergency Management of Child Abuse — which were attended by over 400 medical professionals.

- Provision of technical assistance in communications and evaluation to the newly established New England Life Flight helicopter ambulance system.

The OEMS programs to upgrade resources and to enhance local and regional networks of EMS functioned throughout the year:

- OEMS reviewed and approved 133 basic EMT courses, 182 basic refresher courses, and 2,034 continuing education courses. The program also administered more than 100 basic EMT examinations statewide, a 20 percent increase over last year, certified 2,504 new basic EMTs and recertified 2,964 EMTs.

- OEMS reviewed and approved nine ALS training courses, four ALS refresher courses, and 44 continuing educa-



tion courses for advanced EMTs.

- Training of emergency room nurses was maintained. During the year, 200 nurses participated in eight courses in the Critical Care Emergency Department Nurse Education Program and received certification.

- OEMS completed two base station courses for physicians to learn the principles of medical control, which allows instruction to EMTs for patient care in the prehospital setting.

- OEMS carried out its education of the public and health professionals through an EMS Week public information campaign, six EMS teach-ins in hospitals in Region VI, and publication of six EMT Alert newsletters mailed to a national list of over 3,000.

## HEALTH STATISTICS AND RESEARCH

The Division of Health Statistics and Research carried out its major functions of collecting, analyzing, interpreting, and disseminating statewide data on vital events, cancer incidence, health facilities, and licensed health professionals. As the officially designated Massachusetts State Center for Health Statistics, the Division fulfilled its broader responsibilities to coordinate data among agencies that collect and use health data, to provide statistical standards and technical assistance to users of health and demographic data, and to serve as a clearinghouse for information on resources of public health data.

During fiscal year 1983, the Division recorded the following accomplishments:

- The Registry of Vital Records and Statistics processed and analyzed reports of approximately 250,000 births, deaths, marriages, divorces, and induced abortions, which were summar-

ized in the 139th edition of *Annual Report of Vital Statistics*. In addition, the registry ascertained the completeness and correctness of approximately 150,000 legal copies of vital records, processed 10,000 amendments and corrections, and issued more than 80,000 copies of vital records. Approximately 50,000 persons received their copies at the registry. More than 15,000 genealogists, medical researchers, lawyers and representatives of governmental agencies had access to the 22,000,000 records stored at the registry.

- A new Standard Certificate of Live Birth, which added "Mother's Occupation" to the record, was developed and put into official use. In addition, specially trained staff began coding information on a selected number of 1982 death certificates according to the system for coding occupation and industry developed by the United States Census Bureau. All deaths due to cancer have been coded.

- Using Cancer Registry and other Division data and staff, the Division confirmed cancer elevations or case clusters in several Massachusetts cities and towns (as detailed in the section on Environmental Health Assessment). Ongoing monitoring con-

tinued for a variety of cancers in Ashland, Billerica, Fairhaven, Holbrook, Scituate and Woburn.

After establishing the statewide cancer incidence reporting system and demonstrating the utility of the data, the Cancer Registry has been recognized as a central element in the evolution of cancer control efforts in the Commonwealth (Table 9).

- The Health Resources Statistics Unit surveyed more than 2,000 hospitals, nursing and rest homes, medical and mental health clinics, residential care facilities, and home health agencies for their capacities, services, staffing, and utilization during 1982. The unit also developed and provided a data tape with information about the approximately 800 nursing and rest homes in the state to the National Center for Health Statistics as part of a national data-gathering project on long-term care.

- The Research and Epidemiology Unit developed and published *1985 and 1990 Population Projections by Sex and Age for Massachusetts Cities and Towns*. The projections, which are of key importance to the Department's Determination of Need, planning, and epidemiologic activities, were adopted by the Public Health

**Table 9.**  
Expected\* Cancer Incidence in Massachusetts, 1982.

| ANATOMIC SITE OR TYPE | NUMBER (%)            |
|-----------------------|-----------------------|
| Colorectal            | 4,023 (17.6)          |
| Breast (Female)       | 3,346 (14.6)          |
| Bronchus and lung     | 2,909 (12.7)          |
| Prostate              | 1,678 (7.3)           |
| Bladder               | 1,165 (5.1)           |
| Uterus                | 913 (4.0)             |
| Lymphomas             | 816 (3.6)             |
| Stomach               | 722 (3.2)             |
| Pancreas              | 709 (3.1)             |
| Leukemias             | 690 (3.0)             |
| Brain                 | 328 (1.4)             |
| All other sites       | 5,591 (24.4)          |
| <b>Totals</b>         | <b>22,890 (100.0)</b> |

\*Based on rates from the Connecticut Tumor Registry, 1973 to 1977.

Council in January 1983 for official departmental use. The importance of the age structure of a population in influencing health status and the use of medical care services has been well recognized.

- The Research and Epidemiology Unit has been collaborating with the Divisions of Environmental Health Assessment and Family Health Services in following up possible excesses of malignant neoplasms in over 25 Massachusetts cities and towns.

- A separate Public Information/Data Dissemination Unit was established to supervise the Division's automated data storage, access, and distribution. The unit processed over 100 data requests per month from within the Department and from outside agencies and institutions, and provided developmental consultation to researchers for designing studies and interpreting results. The unit created specially designed machine-readable data files for several on-going research projects including the Lowell/Silresim Health Study of the Departments of Public Health and Environmental Quality Engineering. Two studies of the most recent Board of Registration manpower statistics were completed. At the request of the Area Health Education Center, the unit edited and analyzed the 1980 Registered Nurse File; it also edited, and provided tabular data for, the 1980 Physician Data File for a special project at the University of Massachusetts Medical Center.

## MANAGEMENT SERVICES

Management Services consolidates the activities of the Division of Data Processing, the Budget Office, the Office of Employee Relations, the Fiscal Office, and the Division of Central Services. These Divisions provide centralized administrative services to the Department.

## DATA PROCESSING

The Division of Data Processing provides computer resources to the Department of Public Health through a time-sharing and remote-job entry contract with several bureaus that provide computer services. The Division also provides programming services and advice on data processing to the Divisions and Hospitals of the Department, and reviews all requests for data-processing services, equipment, and systems. Major projects in fiscal year 1983 included:

- Transfer of the Department's largest system, the Long-Term Care Information System, from a private service bureau to one of the Commonwealth's inhouse data centers.

- Technical supervision of the implementation of a Management Information System that links client, program, service, and fiscal information for the Division of Alcoholism.

- Participation in the development and model implementation of the Personnel/Payroll Management System of the Office of Administration and Finance.

- Systems analysis and programming to implement an automated Cancer Registry.

- Implementation of the first phase of an automated client

record system for the Division of Tuberculosis Control.

- Analysis of the requirements of several Divisions for micro-computing, and initiation of the process for the selection and acquisition of microcomputers.

## BUDGET OFFICE

The Budget Office supervised the preparation, implementation, and monitoring of the Department's \$118 million state budget. In addition, it continued to oversee the work of the Contracts and Revenue Units.

## EMPLOYEE RELATIONS

The Office of Employee Relations directed the collective bargaining program of the Department, held civil service hearings for Department employees, and represented the Commissioner at hearings of the Civil Service Commission. The Office administered the Disability Retirement Program for the cities and towns of the Commonwealth.

## FISCAL OFFICE

In addition to providing accounting services for \$152 million in state and federal funds, the Fiscal Office oversaw the operations of the Payroll and Purchasing Units.

## CENTRAL SERVICES

The three units of the Division of Central Services - Personnel, Manpower Training, and Production continued to provide departmentwide services.



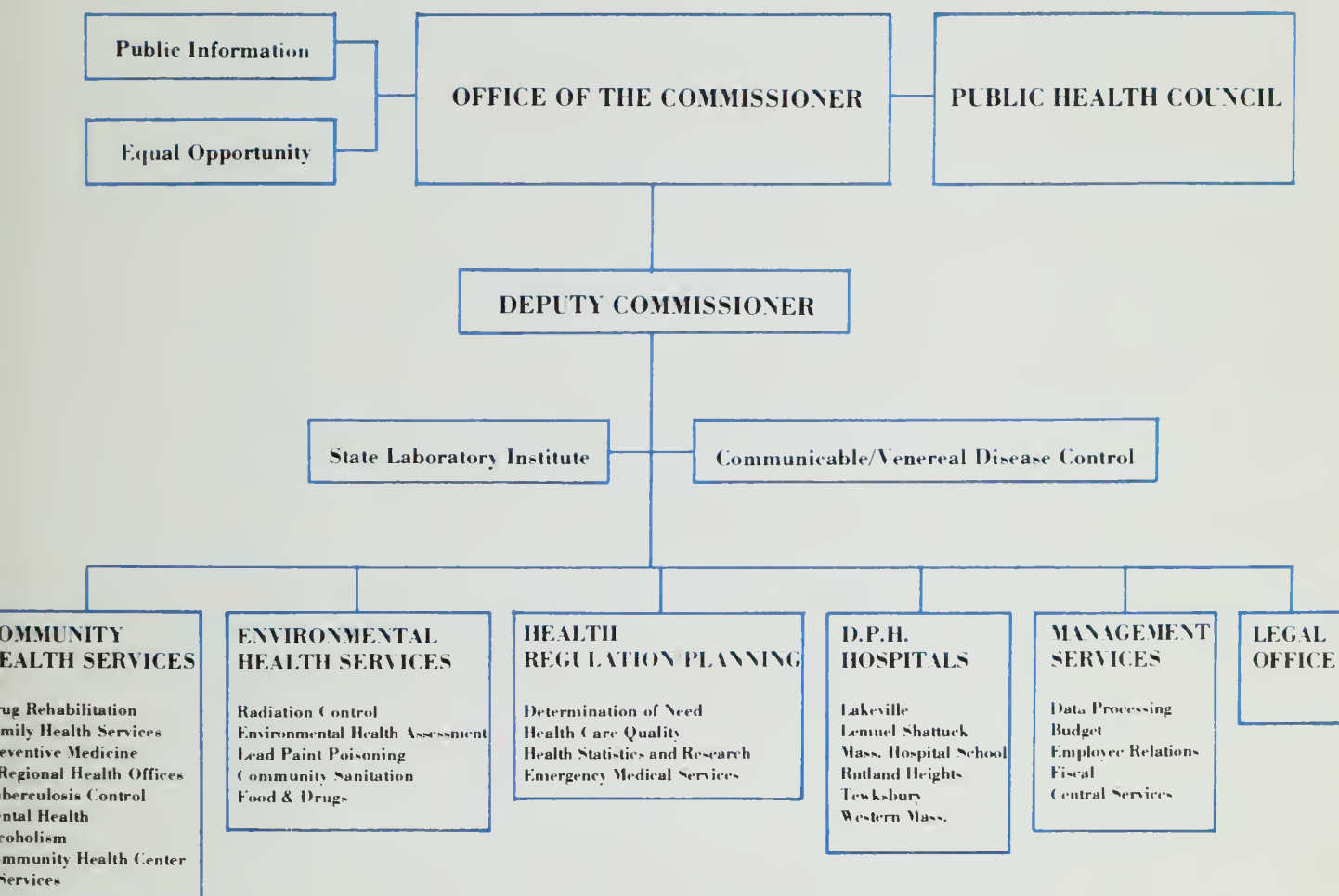
**EXPENDITURE REPORT  
DEPARTMENT OF PUBLIC HEALTH  
JULY 1, 1982 - JUNE 30, 1983**

|                                       | STATE              | FEDERAL           | TOTAL              |
|---------------------------------------|--------------------|-------------------|--------------------|
| COMMISSIONER'S OFFICE                 | 799,316            | —                 | 799,316            |
| MANAGEMENT SERVICES                   | 2,547,629          | —                 | 2,547,629          |
| LEGAL OFFICE                          | 164,226            | —                 | 164,226            |
| <b>Sub Total</b>                      | <b>3,511,171</b>   |                   | <b>3,511,171</b>   |
| COMMUNICABLE AND<br>VENEREAL DISEASES | 3,004,274          | 517,210           | 3,521,484          |
| <b>Sub Total</b>                      | <b>3,004,274</b>   | <b>517,210</b>    | <b>3,521,484</b>   |
| COMMUNITY HEALTH SERVICES             |                    |                   |                    |
| Family Health Services                | 8,448,137          | 24,262,701        | 32,710,838         |
| Preventive Medicine                   | 549,589            | 828,217           | 1,377,806          |
| Tuberculosis Control                  | 2,492,588          | 101,995           | 2,594,583          |
| Local Health                          | 594,118            | 138,727           | 732,845            |
| Dental Health                         | 1,931,577          | 225,638           | 2,157,215          |
| Community Health Centers              | 952,347            | —                 | 952,347            |
| Alcoholism                            | 19,571,629         | 3,755,090         | 23,326,719         |
| Drug Rehabilitation                   | 4,194,409          | 3,748,973         | 7,943,382          |
| <b>Sub Total</b>                      | <b>38,734,394</b>  | <b>33,061,341</b> | <b>71,795,735</b>  |
| ENVIRONMENTAL HEALTH                  |                    |                   |                    |
| Lead Poisoning Prevention             | 775,180            | 636,954           | 1,412,134          |
| Radiation Control                     | 503,377            | 10,211            | 513,588            |
| Consumers Products                    | 1,083,192          | —                 | 1,083,192          |
| <b>Sub Total</b>                      | <b>2,361,749</b>   | <b>647,165</b>    | <b>3,008,914</b>   |
| HEALTH PLANNING AND<br>REGULATION     |                    |                   |                    |
| Health Statistics                     | 1,098,754          | 6,077             | 1,104,831          |
| Determination of Need                 | 398,540            | —                 | 398,540            |
| Emergency Medical Services            | 275,593            | 416,049           | 691,642            |
| Health Care Quality                   | 3,378,115          | 437,431           | 3,815,546          |
| <b>Sub Total</b>                      | <b>5,151,002</b>   | <b>859,557</b>    | <b>6,010,559</b>   |
| HEALTH SERVICES                       |                    |                   |                    |
| STATE LABORATORIES                    | 5,186,109          | 93,134            | 5,279,243          |
| HOSPITALS                             |                    |                   |                    |
| Lakeville Hospital                    | 6,760,457          | —                 | 6,760,457          |
| Lemuel Shattuck Hospital              | 16,891,866         | —                 | 16,891,866         |
| Mass. Hospital School                 | 6,145,822          | —                 | 6,145,822          |
| Rutland Heights Hospital              | 6,193,590          | 4,851             | 6,198,441          |
| Tewksbury Hospital                    | 18,082,914         | —                 | 18,082,914         |
| Western Mass. Hospital                | 5,149,479          | —                 | 5,149,479          |
| <b>Sub Total</b>                      | <b>64,410,237</b>  | <b>97,985</b>     | <b>64,508,222</b>  |
| <b>TOTAL</b>                          | <b>117,172,827</b> | <b>35,183,258</b> | <b>152,356,085</b> |

# EXECUTIVE OFFICE OF HUMAN SERVICES

## MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

June 30, 1983







**The Commonwealth of Massachusetts  
Michael S. Dukakis, Governor**

**Executive Office of Human Services  
Manuel Carballo, Secretary**

**Department of Public Health  
Bailus Walker, Jr., Ph.D., M.P.H., Commissioner**

**Publication of this Document Approved by  
Daniel D. Carter, State Purchasing Agent**

**3m-1/84-176407**

**Estimated cost per copy \$1.08**

*“Working  
to maintain, protect  
and improve the health  
and well-being  
of the people”*

*Annual Report - 84*

*- Massachusetts Department of Public Health -*

MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH

June 30, 1984

Bailus Walker, Jr., Ph.D., M.P.H.  
*Commissioner of Public Health*  
*Chairman, Public Health Council*

PUBLIC HEALTH COUNCIL

|                                    |           |
|------------------------------------|-----------|
| Bertram A. Yaffe, B.Ph.            | 1979-1984 |
| Phillip Quinn, M.D.                | 1981-1984 |
| Linda R. Creedon, B.S.             | 1979-1985 |
| Robert J. Brennan, M.D.            | 1980-1986 |
| William A. Burke, Jr., M.B.A.      | 1981-1987 |
| Alfred A. Ponte, B.B.A.            | 1981-1987 |
| Sean Rush, M.B.A.                  | 1982-1988 |
| Susan R. Windham, Ph.D.            | 1983-1989 |
| Barbara Corcoran, <i>Secretary</i> |           |

Pearl K. Russo, *Editor*  
Roger M. Davenport, *Graphic Design*





Fiscal year 1984 marked my first full year as Commissioner of Public Health. To improve the Department's ability to serve the public in a period of change and challenge in public health, we undertook a realignment of the Department's organizational structure. By the end of the fiscal year, revisions had been implemented and programs developed. These changes were made to meet the following objectives:

1. To develop a stronger infrastructure to enhance a broad societal approach to the prevention of the occurrence and progression of disease.
2. To strengthen avenues now open for improving the health of Massachusetts communities, including environmental health measures, health education, and personal health care.
3. To develop productive and efficient working relations with voluntary health groups and all elements of the diverse Massachusetts health community.
4. To improve exchange of information to promote innovation and excellence in the provision of public health services.

To accomplish these objectives within existing resources, we created four major organizational entities:

•**Office of Policy Development and Planning**—to provide a focal point for policy development and long-range planning and evaluation of services. The office will serve as the policy-planning link to the Executive Office of Human Services and to other agencies in the Commonwealth. It will also participate in the development and monitoring of state and federal health legislation.

•**Office of Local Health Services and Regional Operations**—to strengthen ties with regional and local health programs in a uniform health services system to provide available, accessible, and acceptable health services throughout the Commonwealth. The office will also provide administrative support services for the Department's six public health hospitals. The office will ensure the participation of local and regional health offices and the six hospitals in plans for the development of state public health programs.

•**Office of Public Information and Health Education**—to plan, organize, and conduct statewide programs to impart information about health policy and health services, and to motivate the public to use the information for the promotion of individual and community health. The enlarged office consolidated health education and communication services that had previously been provided by other Departmental divisions.

•**Center for Health Promotion and Environmental Disease Prevention**—to improve the Department's ability to respond to health issues and problems that are, to one degree or another, caused, mediated, or aggravated by environmental factors. The Center has coordinated existing efforts in the prevention of heart disease, cancer, and stroke, and consolidated health promotion-prevention services and programs, including environmental epidemiology and toxicology, environmental risk assessment and management, and lifestyle risk-factor reduction.

By the end of the fiscal year, the Center had developed an integrated approach to the prevention of premature deaths from heart disease, cancer, and cerebrovascular disease in Massachusetts. The emphasis of an aggressive statewide effort, to begin early in fiscal year 1985, will be on the prevention of premature deaths from these three causes through a reduction in their underlying risk factors. The Department's expectation is that, within five years, at least 2,000 premature deaths will be prevented annually in Massachusetts as a result of the program.

In addition to the organizational changes described, the Women's Health Program and the Child Passenger Safety Resource Center became part of the Division of Family Health Services to unify Departmental programs that serve women and children.

As the Department continued to carry out its goal "to maintain, protect and improve the health and well-being of the people," it embarked on several new programs. A statewide program was initiated to prevent Fetal Alcohol Syn-

drome (FAS) and other child health problems related to alcohol consumption during pregnancy. The Department estimates that as many as 100 infants are born in Massachusetts each year with FAS, one of the three leading known causes of mental retardation along with Down's syndrome and spina bifida. The program will not only save the Commonwealth thousands of dollars in health care costs for such infants but also prevent the human suffering that accompanies these illnesses.

Noteworthy was the completion and release of the 1983 Massachusetts Nutrition Survey, which found that malnutrition is a significant public health problem among low-income preschool children in the state. Release of the survey results prompted passage by the Legislature of an emergency state supplemental appropriation totaling nearly \$3.4 million. The appropriation was precedent-setting because the bulk of the funds went to increasing participation in the Special Supplemental Food Program for Women, Infants and Children (WIC). This move represented the first time in the nation that state funds were used to supplement the U.S. Department of Agriculture's funded program.

The Department also became involved during the year in the growing national debate over the presence of chemical pesticides in our food supply. The Department adopted strict state standards limiting the amount of ethylene dibromide (EDB) allowed in foods sold in the Commonwealth, and embarked upon a broad testing and regulatory program.

The development of a preliminary state policy on organ transplantation was another major achievement of fiscal year 1984. A state Task Force on Organ Transplantation, established by the Executive Office of Human Services and staffed by the Department, suggested a number of standards and processes for evaluating the use of organ transplants.

During the course of the year, with guidance from the Task Force, the Department approved the establishment of

demonstration programs in liver and heart transplantation.

The Department's Cancer Registry released its first *Annual Report of Cancer Incidence in Massachusetts*, which provides information on nearly 24,000 cases of cancer diagnosed in Massachusetts residents in 1982 and reported to the Registry for the first time. Release of the report resulted in the appropriation of additional state funds for cancer control.

Another "first" for the Department was the development of a television educational service announcement on the medical and public health consequences of a nuclear war, and the overriding need to prevent its occurrence. The announcement was carried by a number of television stations around the state, and was also being used as part of community discussions on the topic.

Recognizing that the numbers of homeless people were growing, the Department expanded its services and facilities for the homeless population. The homeless shelter located at the Shattuck Hospital was enlarged to house 100 people nightly, while renovations were begun at the shelter located at Tewksbury Hospital. Besides providing nightly lodging and meals, the shelters increased their medical and social services programs. Working closely with other state service agencies, the Department is pursuing a vigorous program to help the homeless make the transition back to a more stable work and home environment.

This Annual Report is a brief accounting of the activities of the Department of Public Health during a year of difficult decisions, but of continuing progress in providing health care services of high quality to the people of the Commonwealth. To the many organizations, agencies, and individuals in Massachusetts who continue to support the Department of Public Health's health promotion efforts, we express our sincere thanks.

Bailus Walker, Jr., Ph.D., M.P.H.

*Bailus Walker Jr Ph.D*  
Commissioner

---

***"Working  
to maintain, protect  
and improve the health  
and well-being  
of the people"***





# CENTER FOR HEALTH PROMOTION AND ENVIRONMENTAL DISEASE PREVENTION

The Center for Health Promotion and Environmental Disease Prevention implemented a number of organizational changes before the end of fiscal year 1984, preparatory to embarking upon a broadened program of activities in the next fiscal year. The Center includes three Divisions, each responsible for specific activities.

## HEALTH PROMOTION SCIENCES

The Division of Health Promotion Sciences provided such public health interventions as hypertension screening, smoking prevention, fitness programs, and the provision of nutritional expertise and information.

### Hypertension Control Services

The Hypertension Control Program strengthened community-based services and professional education during fiscal year 1984. Eleven community health agencies were funded to provide comprehensive hypertension control services to high-risk populations within their service areas. These services were offered in both worksites and community settings. Hypertension screening, referral, and health education about the multiple risk factors for cardiovascular disease were provided to all persons served by the agencies.

Data collected on approximately 10,000 residents screened during the year indicated that the agencies were successful in reaching minorities and low-income populations, and that hypertension was more prevalent in the targeted groups. In addition, data on a sample of hypertensive clients followed for six months showed significant reductions in blood pressure.

The Hypertension Training and Education Center, funded by the Center, offered a comprehensive program of professional education to nurses, nutritionists, health educators, administrators, and health aides. Health care providers from 25 agencies throughout the state attended training sessions and received information on clinical management of hypertension, nonpharmacological approaches to the control

of hypertension, strategies for community outreach, worksite marketing, and evaluation methodology.

### Smoking Prevention

In fiscal year 1984, three state colleges, with resources provided by the Department of Public Health, offered graduate level smoking and alcohol abuse prevention courses to train teachers and allied school personnel in the implementation of substance abuse programs. More than 100 teachers were trained throughout the state. The Department of Education's Commonwealth Inservice Institute, which responds to the specific needs of teachers, received funds for inservice training on smoking and alcohol abuse prevention. In fiscal year 1984, nine school systems trained 163 teachers to implement such programs.

As part of the program's activities to prevent smoking and to help smokers break the habit, staff prepared the "Smoking Brake," a 14-minute smoking cessation videotape to be used on closed circuit television. "Break the Habit," a five-part smoking cessation program, was developed for use on radio, and will be implemented early in the next fiscal year.

The brochure *Your Smoke Is Their Smoke* alerted parents who smoke to the dangers second-hand smoke poses to young children, and suggested measures for minimizing the effects of smoke. Approximately 40,000 copies were distributed to hospitals, health maintenance organizations, and neighborhood health centers.

The *Nonsmokers' Guide to Massachusetts*, prepared in conjunction with the American Lung Association of Massachusetts, included sections on second-hand smoke, laws relating to smoking, a list of insurance companies that offer discounts to nonsmokers, health care facilities that have nonsmoking policies, and restaurants with nonsmoking areas. During the year, the Department worked with the Massachusetts Hospital Association and others to develop educational material to conduct workshops on smoking cessation strategies.

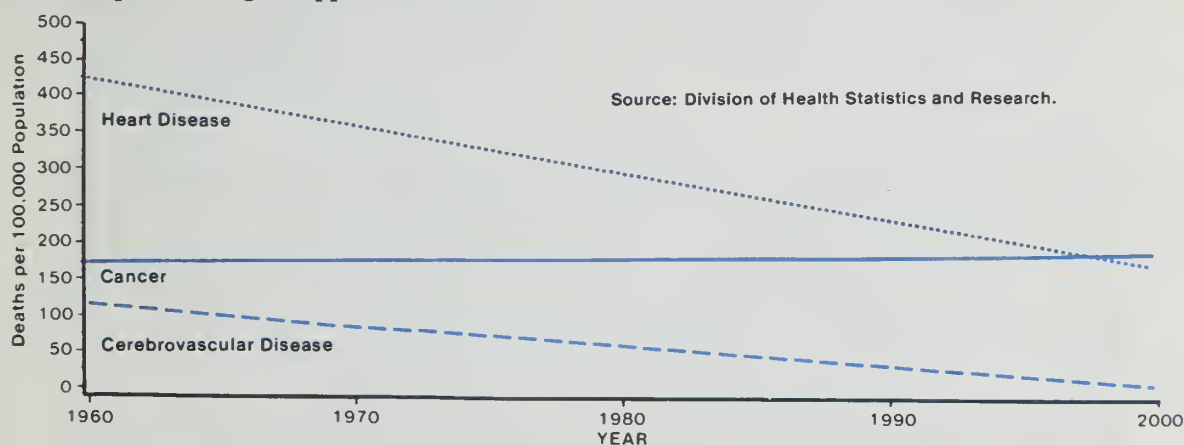


Figure 1. Massachusetts Age-Adjusted Mortality Rates Per 100,000 Population for all Cancers, Heart Disease, and Cerebrovascular Disease, Actual and Projected, U.S. 1970 Standard Million, 1960 - 2000.



### Fitness Programs

The LifeStyle Program, a worksite health promotion service, was offered to approximately 600 state employees in 20 agencies. The program provided public employees with the information and techniques necessary to identify personal risk factors, and the support and skills required to make positive changes in health behavior. Activities of LifeStyle included educational presentations, counseling, and exercise classes.

Two Resource Centers for Firefighter Fitness, which were again funded by the Center in fiscal year 1984, demonstrated that firefighters committed to a regular fitness program can increase the efficiency of their cardiovascular systems and reduce the percent of body fat. The two centers served firefighters from 15 Massachusetts communities and offered cities and towns testing, workshops, and health risk appraisals.

### Massachusetts Nutrition Resource Center

The Massachusetts Nutrition Resource Center (MNRC) provided consumers and health professionals with authoritative and reliable information about nutrition and related health topics through a statewide, toll-free nutrition hotline and mail request service. Materials on nutrition topics, including heart health, fiber in the diet, and how to reduce salt and fat in the diet, were made available through these services. Residents of Massachusetts were also able to obtain referrals to nutrition services and resources throughout the state, such as WIC offices, cooperative extension services, food stamp offices, registered dietitians, and child feeding programs. During fiscal year 1984, MNRC answered almost 8,000 calls and responded to approximately 2,000 mail requests for information on weight control, sodium in the diet, fiber, calcium needs in adults, and nutrition for senior citizens.

In addition, four Massachusetts communities were targeted for extensive outreach activities, and two special nutrition education projects were begun. A nutrition newsletter supplement was published for family day care providers and nutrition education materials developed for staff of, and participants in, food pantries.

## RESEARCH AND EVALUATION

The Research and Evaluation Division evaluates the effectiveness of the Center's efforts to reduce the incidence of chronic disease and disability, and of its health promotion and disease prevention activities. In fiscal year 1984, four major evaluations were accomplished.

- In collaboration with the Women's Health Program, the research staff conducted a study of rape crisis centers funded by the Department. Demographic and other data on 911 clients were collected by 11 of the 16 centers. Analysis of the data indicated that 96 percent of the victims using the centers were female; 18 percent were under the age of 20; and most important, 60 percent had never reported the crime to the police,



Photo by Dennis Sterzin.

State employees in jazz aerobics class offered by the LifeStyle Program.

hospitals, or any other agency. The centers were thus providing services to a large number of rape victims who had not been reached by more traditional agencies.

- The Massachusetts Nutrition Resource Center surveyed a sample of persons using their toll-free hotline to evaluate callers' satisfaction with the hotline and related MNRC services. Approximately 80 percent of persons sampled reported that the information they received was adequate to meet their needs.

- A study of over 300 clients of the hypertension control program found that follow-up and monitoring of hypertensive clients, when done in compliance with program protocols, yielded significant drops in systolic and diastolic blood pressures.

- Division staff analyzed data from a survey of all Department of Public Health employees that solicited their opinions on the hazards of smoking in the workplace, a first step in assessing employee support for a Department-wide smoking restriction policy.

## ENVIRONMENTAL EPIDEMIOLOGY AND TOXICOLOGY

The Division of Environmental Epidemiology and Toxicology was transferred to the Center for Health Promotion and Environmental Disease Prevention. It continued to carry out major disease prevention services.

### Environmental Epidemiology

Responding to reports of unusual occurrences of disease thought to be related to environmental factors, the En-

vironmental Epidemiology Unit carried out the following investigations:

- Peabody**—The Unit undertook a major investigation to determine whether elevated mortality rates from pancreatic cancer in Peabody were related to environmental contamination, and to identify risk factors associated with the disease. On the basis of interviews with informants for residents who had died of pancreatic cancer between 1974 and 1982, and of environmental data collected for Peabody, the Unit found no association between environmental contaminants and pancreatic cancer.

- Lowell**—The results of a study jointly sponsored by the Department and the Department of Environmental Quality Engineering (DEQE) on the health effects among residents near the Silresim site, a former waste recycling plant, were made public in fiscal year 1984. Carried out by the Boston University School of Public Health, the study found no unusual patterns of mortality, increased cancer risk, birth defects or other reproductive hazards. Although less severe health effects, such as respiratory symptoms, persistent colds, and fatigue, seemed to be more common in the vicinity of the site, investigators could not conclude that the site was the cause of the adverse health effects.

- Salem**—Four cases of Hodgkin's disease diagnosed from 1979 to 1982 among students at Salem High School had been investigated in fiscal year 1983. A report based on interviews with the parents, released in fiscal year 1984, showed no association between environmental exposure and the elevated incidence of the disease in Salem.

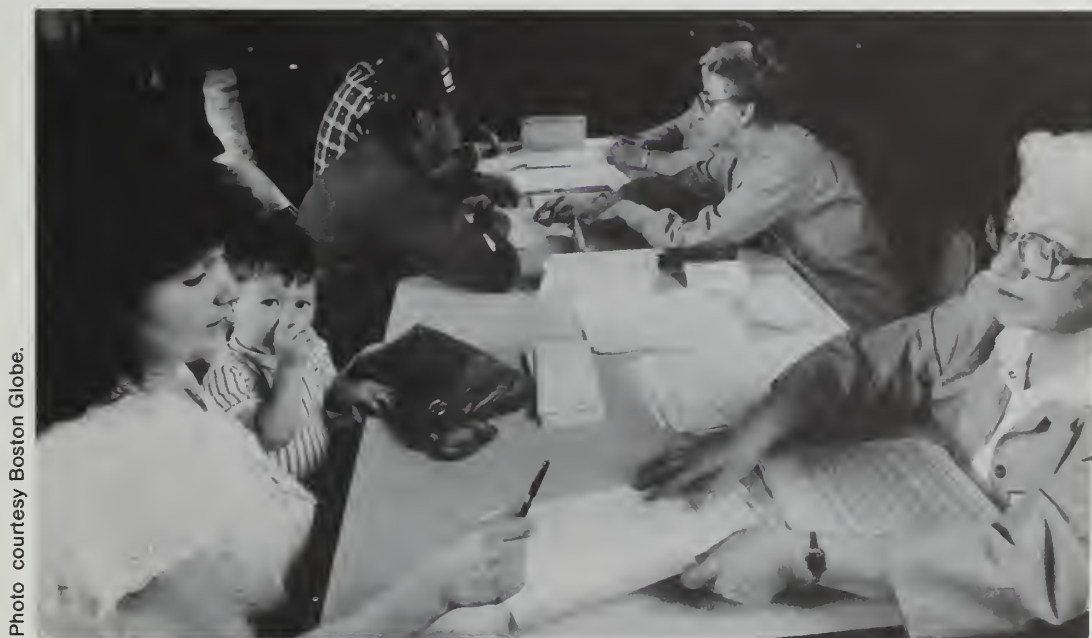
- Town Studies**—The Unit responded to requests from residents and public officials of a number of towns

throughout the state to investigate disease rates in their towns. Investigations were carried out in Whately, Littleton, Wilmington, Templeton, Marshfield, Hanson, West Fitchburg, Randolph, and Lexington. All but two of the studies, which examined cancer mortality rates in each town, found no elevation of rates. In the Town of Marshfield, elevations in mortality from prostate cancer from 1979 to 1982 and in the incidence of leukemia in males in 1982 were noted. A review of the statistics for breast cancer mortality in Lexington showed significantly more deaths than had been expected for the period from 1969 to 1973, but not for the periods 1974 to 1978 and 1979 to 1982. In addition, the number of newly diagnosed breast cancer cases in 1982 was approximately the same as expected.

### Environmental Toxicology

The Environmental Toxicology Unit carried out health risk assessments of exposure to toxic substances in the air, water, food, and consumer products. The Unit also provided assistance to both the public and private sectors on the health effects of hazardous substances and produced educational materials to help respond to the growing number of inquiries from the public. Staff also served as advisors to state agencies and committees established to assess the effects of environmental pollutants on the health of the people. The Environmental Toxicology Unit conducted the following studies during the fiscal year.

- PCB Study**—A detailed review of the health effects of polychlorinated biphenyls (PCBs) in humans and other species was completed. Staff carried out an exposure assessment for PCBs among a sample of Norwood residents who lived in the vicinity of a former dumpsite and who had the greatest poten-



Norwood residents fill out questionnaires for survey on PCB exposure.



tial for exposure. The result of the screening indicated that all residents, with the exception of one, were well within "background" levels found in the general population of the country. The one exception could have been exposed in the workplace.

Toward the end of the fiscal year, the Unit learned that the Division's proposal for a two-phase study of PCBs in the New Bedford area had finally been approved by the U.S. Centers for Disease Control (CDC). Plans were begun to hire a director and personnel to staff the project. Phase I of the study, scheduled to begin in September 1984, calls for a random study of New Bedford area residents to determine PCB exposures.

•*Other Toxic Substances Studies*—To allay public concerns over the discovery of such chemicals as aldicarb, EDB, malathion, and naphthalene in drinking water or in the am-

bient air, the Unit conducted literature searches, prepared risk assessments of the chemicals, and produced educational materials on the health effects of the pesticides. Similar studies were done on chlorpyrifos and pentachlorophenol, chemicals used for termite control, and in the case of the latter, also as a wood preservative.

•*Right-to-Know Law*—The Unit developed the Massachusetts Substance List required under the Right-to-Know Law passed in fiscal year 1984. The Unit was charged with determining substances that are considered carcinogens, mutagens, teratogens or neurotoxins. Under provisions of the law, workers have the right to know what substances, including those listed under brand names, they are working with and what the possible harmful effects of exposure might be. The law aims to help prevent or reduce the incidence of chemically induced illnesses.



## RIGHT to KNOW

### WORKPLACE NOTICE

THE RIGHT TO KNOW LAW, Chapter 111F of the Massachusetts General Laws, provides new rights to employees and community residents regarding the communication of information on toxic and hazardous substances.

Those rights include:

**WORKPLACE NOTICE** A notice must be posted in a central location in the workplace informing employees of their rights under the law. The notice must be in the English Language. It must also be available to non-English speaking persons in their language.

**TRAINING** Employers must provide an annual training program to employees who work with toxic or hazardous substances. New employees must receive training within thirty days from date of hire. The training program must be conducted by a competent person and may be in the form of verbal and/or written instruction. At a minimum, training must include an explanation of employee rights, the MSDS as a document, and those MSDS's covering toxic or hazardous substances used, handled or stored in the workplace; applicable protective equipment, clothing and labeling of substances that are carcinogenic, mutagenic, teratogenic or neurotoxic. The employer must keep a record of this training or instruction which must be given with pay during the employee's normal work or shift hours.

**MATERIAL SAFETY DATA SHEET** (MSDS) The Material Safety Data Sheet is the document that provides information on each toxic or hazardous substance used or stored in the workplace. An employee or his or her designated representative has the right to obtain and examine the MSDS for any toxic or hazardous substance to which the employee "is", "may be" or "has been" exposed, if the employee's request is made to the employer in writing. After four working days from the date the request is made an employee can refuse to work with the substance when two conditions exist.

1. The employer fails to furnish the employee with an MSDS and 2. the employer fails to furnish the employee with proof that the employer has exercised diligent efforts to obtain an MSDS, either from the manufacturer or through the Commissioner of Labor and Industries.

Public employees classified as performing an essential service may not refuse to work with the substance.

**LABELING** All containers in the workplace of more than five pounds or more than one gallon, containing toxic or hazardous substances, must be labeled with the chemical name of the substance. Containers of mixtures must be labeled with the chemical name of each toxic or hazardous constituent when the constituents comprise one percent or more of the mixture. Containers of more than 30 pounds or more than 5 gallons must also be labeled with the appropriate National Fire Prevention Association (NFPA) Symbol. Labels must be clear, prominent, in English and weather resistant.

**NON-DISCRIMINATION** An employee who believes he or she has been discharged, disciplined or discriminated against by an employer for exercising rights granted under the Law, has one hundred-eighty days to file a complaint with the Commissioner of the Department of Labor and Industries. A copy of the verified complaint must be sent to the employer at the same time by certified mail.

**NOTE:**

The employee's rights listed above are further defined under Chapter 111F of the Massachusetts General Laws and the Code of Massachusetts Regulations 441 CMR 21.00. For additional information call the nearest office of the Department of Labor and Industries: Boston (617) 727-5816, Fall River (617) 675-7962, North Andover (617) 682-8570, Worcester (617) 752-6504, Springfield (413) 734-1421, Pittsfield (413) 445-4214.

George W. Ripley

*George W. Ripley*

Commissioner  
Department of Labor and Industries



## COMMUNITY HEALTH SERVICES

The Bureau of Community Health Services coordinates the activities of the divisions and units that provide a major part of the Department's direct services to the people of the Commonwealth: the Divisions of Family Health Services, Tuberculosis Control, Dental Health, Alcoholism, and Drug Rehabilitation, and the Office of Community Health Center Services. In fiscal year 1984, the Department re-funded 37 community health centers, which offer five categories of care: dental services, obstetrical and gynecological services, pediatric and adolescent care, social services, and primary care.

## FAMILY HEALTH SERVICES

The mission of the Division of Family Health Services is to promote the health of women, children, and families, especially those with low incomes or special needs, by ensuring access to health care services of high quality, and by developing and implementing strategies to prevent death, disease, and disability. Through state funds, federal Maternal and Child Health Block Grant funds, funds for the Special Supplemental Food Program for Women, Infants and Children (WIC), a portion of the Preventive Health Services Block Grant for rape crisis services, as well as other special state and federal grants, the Division provides services both directly and through contract. The Division's responsibilities are carried out by two offices — Maternal and Child Health (MCH) Services and Services to Handicapped Children (SHC). A Policy Office and Statistics and Evaluation Unit provide central support for research, needs assessment, and policy-related activities.

### Maternal and Child Health

Three major programmatic units of the Division's Maternal and Child Health Services provide a range of preventive and primary health care services to women, children, adolescents, and their families. The MCH Section expanded services in fiscal year 1984 as a result of a federal emergency supplemental appropriation (the Jobs Bill), which had been allocated in the previous fiscal year. The Women's Health Program and the Child Passenger Safety Resource Center were added to Maternal and Child Health, complementing related activities in MCH for women and children.

- *The Perinatal, Preschool, and School Health Unit* provided services designed to prevent death, disease, and disability. With funding support from the Jobs Bill appropriation, the Unit successfully strengthened the system of care for high-risk infants. The High-Risk Infant Identification System became fully operational. An estimated 10,000 infants will be identified yearly through the system, which will be used to ensure linkage of the infants to appropriate follow-up services, and to produce data for needs assessment and planning purposes. Additionally, all Neonatal Intensive Care Units (NICUs) in the state received funding from the Division to ensure discharge planning and follow-up for NICU babies. Over

1,500 infants and their families received community-based support services, primarily through home visits.

The activities of the Child Passenger Safety Resource Center (CPSRC) will now be more closely integrated with the Division's Statewide Childhood Injury Prevention Program (SCIPP). In fiscal year 1984, SCIPP established an Injury Prevention Resource Center. Both programs provide information, and educational and technical assistance to community agencies and organizations. SCIPP's services reached 1,300 professionals representing health care, children's services, and educational organizations. CPSRC continued to monitor implementation of the 1981 Child Passenger Safety Law, and to encourage additional legislative action to prevent injuries and fatalities related to motor vehicle accidents. Between 1979 and 1983, the use of car restraints for children aged one to four years increased from 19 to 63 percent.

In fiscal year 1984, the Perinatal, Preschool, and School Health Unit began planning a statewide Preschool Health Initiative. A needs assessment of licensed day care centers in Boston and Springfield was conducted to identify current services, resources, and unmet needs. A statewide conference, "Focus on Health," drew over 300 teachers, parents, administrators, and social service and health care workers interested in preschool health issues and services. During the fiscal year, one preschool health demonstration project funded by the Division provided services to approximately 1,200 children and 2,000 parents and day care staff members in 12 towns in the Holyoke-Chicopee area.

The Unit continued to support the following services: education and support for the approximately 100 families who, each year, lose an infant to Sudden Death Syndrome; purchase of approximately 400 hearing aids and repair of over 800 aids for financially eligible children; hearing and vision screening of over 900,000 school-age children, and scoliosis screening of over 250,000 school-age children; information to approximately 1,000 callers through the Environmental Hot Line on the effects of hazardous substances on the health of pregnant women and their unborn children; through the Massachusetts Poison Information Center, information and follow-up of over 57,000 poison control hotline calls; and specialized diagnostic evaluations for about 100 daughters of women exposed to diethylstilbestrol (DES).

- *The Primary Care Unit*, through its Maternal and Infant Care (MIC) and Children and Youth (C&Y) projects, ensured the provision of comprehensive prenatal and pediatric multidisciplinary care to approximately 3,800 high-risk, low-income mothers and 45,000 children. Jobs Bill funding allowed the Division to establish four MIC projects in areas of high need in the state, to support a team providing obstetric and gynecologic services to Boston community health centers, and to establish a pediatric health care service in Athol, a town with the highest unemployment rate in Massachusetts.

Jobs Bill funding was also used to increase the Division's support for adolescent health services. State and federal funds supported nine Pregnant and Parenting Adolescent Programs

and six Comprehensive Adolescent Health Programs. In addition to medical care, the latter services include counseling and education that emphasize nutrition, substance abuse prevention, contraception, sexuality, pregnancy, parenting skills, and promotion of good health habits. Approximately 14,000 adolescents were served through these programs.

• *The Women, Infants and Children (WIC) Unit* received supplemental state funding in fiscal year 1984 to increase the number of women, infants, and children under age five who receive supplemental nutritious foods, nutrition counseling, and health care referrals. Eight new local programs were opened to bring to 35 the total statewide. As a result of a major outreach campaign, 60,000 women, infants, and children were being served at the close of the fiscal year. Outreach materials developed by the Unit were being used on a national basis. Additional state funding also allowed WIC to design specialized services for Southeast Asians that will be implemented in the next fiscal year.

• *The Women's Health Program* continued to provide services designed to decrease morbidity and mortality among women. The original eight Rape Prevention and Victim Services Programs, which had provided counseling and education services to more than 1,100 women, children, and men in the two previous years, grew to 16. In June 1984, the Women's Health Program, in conjunction with the Governor's Office, coordinated and participated in the Annual Victims of Crime Conference: Violence Against Women. The Program also designed a high school curriculum to promote discussion of the relation between stress and violence, as well as of attitudes about the roles of men and women in society. Schools and agencies serving youth are currently pilot-testing the curriculum. During the fiscal year, the Women's Health Program began a new initiative to increase awareness of health and safety issues in the workplace. The Program continued to provide information and education to the public on the health effects of DES, and counseling and educational programs for women incarcerated in two Massachusetts Correctional Institutions through the Women's Health and Learning Center, which served more than 300 women.

#### Services to Handicapped Children

Four units within the Division's Services to Handicapped Children worked to maximize the healthy growth and development of disabled children, and sought to keep them at home or in the community whenever possible.

• *The Early Childhood Development Services Unit* was created to provide additional administrative support for the Division's increased responsibility for services to young children. Mandated by action of the Legislature in fiscal year 1983 to assume responsibility for the statewide network of 44 Early Intervention (EI) programs, and to improve the quality of the programs, the Division developed standards for the program for the first time and established a class rate for EI services. At the close of the fiscal year, the EI network was serving 2,500 children as compared to 2,100 children when the Division assumed responsibility in January 1983.



Photo courtesy USDA.

Baby enrolled in the WIC Program.

*The Community Services Unit* provided access to a range of community support and residential services for disabled children from birth through 21 years of age to help families keep their children as close to home as possible. The multidisciplinary, interagency Medical Review Team reviewed and approved requests for placement in pediatric nursing homes, and assisted families in obtaining alternative support services when such placement was deemed inappropriate. Home health care services were provided for approximately 185 children; summer camperships were supported for 280 children, and 15 children received residential respite care.

*The Clinical Services Unit*, through specialized clinics directly operated by the Division, or from which services were purchased, provided comprehensive multidisciplinary diagnostic and habilitative services to over 6,000 handicapped children during fiscal year 1984. Families of approximately 300 of these children received testing for genetic diseases and counseling services. The Unit also established two new programs: the Adaptive Housing Program to assist



families in making minor modifications in their homes to facilitate caring for their handicapped child at home and to promote independent functioning of the child; and the Pilot Program for Children with Special Medical Needs to serve children with chronic, disabling physical illnesses for whom no other SHC assistance was available. Between 50 to 75 children were served through the two programs.

•*The Case Management Services Unit* provided technical assistance, information, and case management services to approximately 1,500 handicapped children receiving Supplemental Security Income (SSI) and/or enrolled in other SHC programs. Staff of the Unit, working out of the four regional health offices and Boston, provided training to staff of other state human services agencies and other organizations on entitlements and services available to handicapped children, especially those with low income.

#### Research, Needs Assessment, and Policy Development

In fiscal year 1984, the Division continued to assess maternal and child health needs and problems, and to work with other divisions in developing policies and programs that further promote the health of women, children, and families.

The Division completed and released the 1983 Massachusetts Nutrition Survey. One of the major findings was that 9.8 percent of the 1,429 children sampled, aged six months to six years, were stunted or had height-for-age levels

below the 5th percentile of national norms, twice what would be expected. This finding means that an estimated 10,000 to 17,500 poor, young children across the state may be suffering from inadequate food intake over a prolonged period of time (Fig. 2). The poorest children, Southeast Asian children, and children enrolled in Medicaid were identified as being at high risk for malnutrition.

The supplemental funds appropriated by the Legislature after release of the findings of the survey allowed the Division to establish Failure-to-Thrive Programs in four major medical centers and satellite sites across the state. These comprehensive programs evaluate, diagnose, and treat approximately 600 children exhibiting this severe form of malnutrition, and assure linkage to primary care providers for the children and their families.

The Division received federal funding for another major needs assessment initiative. The Tri-Agency Project for the Development of Policy and Program Strategies for Handicapped Children and Their Families is a collaborative three-year program with the Children's Hospital's Developmental Evaluation Center and the Harvard School of Public Health's Department of Maternal and Child Health and Aging. The Division continued to update and refine needs assessments conducted over the past few years for WIC, Primary Care, and Childhood Lead Poisoning Prevention, and to use them for distribution of supplemental funds in fiscal year 1984.

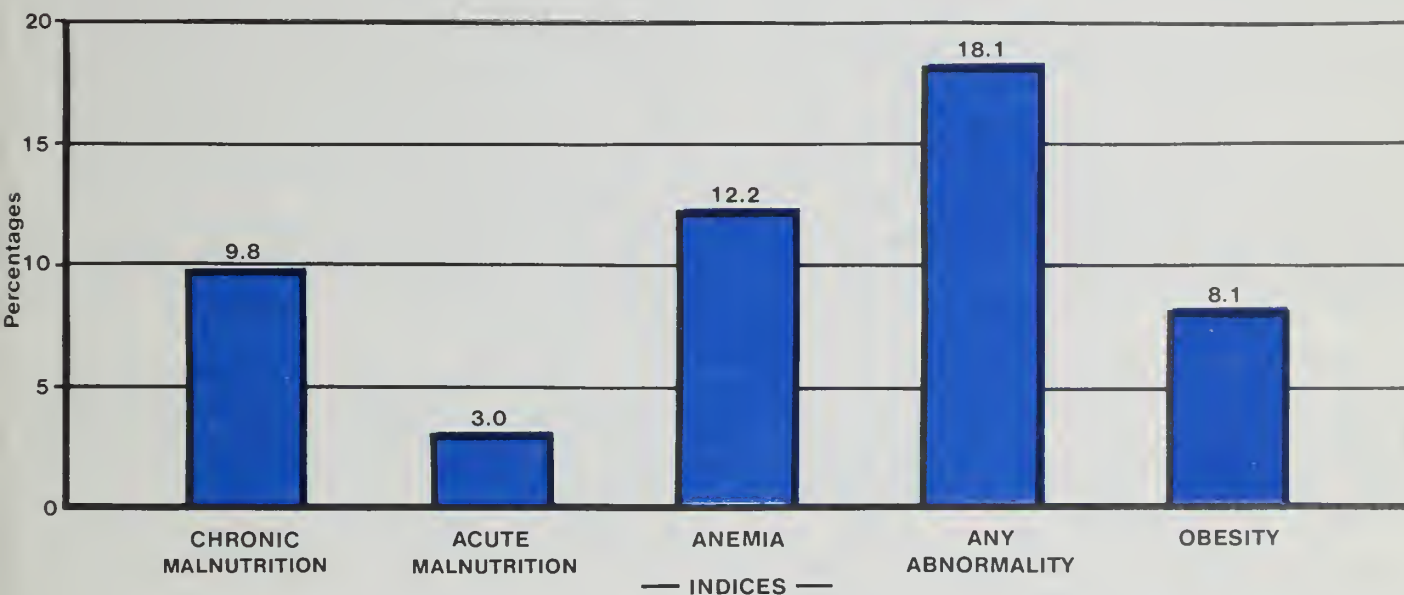


Figure 2. 1983 Massachusetts Nutrition Survey, Indices of Poor Nutrition.



## TUBERCULOSIS CONTROL

The Division of Tuberculosis Control has primary responsibility for the surveillance of tuberculosis in the Commonwealth, as well as for the development of programs to treat and control the disease.

After an increase of almost 12 percent reported for the two previous years, the tuberculosis rate in Massachusetts declined sharply in calendar year 1983. The number of newly diagnosed cases reported by physicians in 1983 totaled 389, a decrease of 114 from 1982. The 1983 case rate also showed a decrease from 8.75 per 100,000 population to 6.78. The reduction in the case rate was influenced by two factors: the Refugee Health Services Program, conducted under a federal grant awarded to the Division, became fully operational in providing necessary outreach interpreter and prevention services to assist tuberculosis clinics and local boards of health; and the federal government made the decision to treat Southeast Asian refugees with diagnosed tuberculosis in the refugee camps in the Philippines before releasing them for immigration to the United States.

In addition to the Refugee Health Services Grant, the Division was awarded a Federal Cooperative Agreement Grant, which provided 10 part-time outreach/case register surveyors and a project coordinator to assist 18 cities with tuberculosis case rates above the Massachusetts state average.

A network of 10 inpatient and 32 ambulatory programs in community hospitals makes tuberculosis diagnostic treatment services available and accessible to residents of every city and town in Massachusetts. The efficacy of chemotherapy in the treatment of tuberculosis has resulted in the growth of ambulatory care programs and in reduced lengths of stay of patients admitted for acute care in contract hospitals. In fiscal year 1984, the average length of stay was less than half that in the same hospitals in 1976. The State Tuberculosis Laboratory was transferred from Mattapan Hospital to the State Laboratory Institute in November.

During the fiscal year, the Division strengthened continuing programs to control and prevent tuberculosis in the Commonwealth:

- Direct diagnostic and tuberculosis treatment services for tuberculosis patients and their contacts, including free tuberculosis drugs.

- Isoniazid (INH) preventive therapy programs through the inpatient and ambulatory programs in community hospitals under contract to the Department.

- Diagnostic and treatment-monitoring laboratory services without cost to patients, on a statewide basis, through the central Tuberculosis Laboratory.

- An automated Central Tuberculosis Case Register to track patients with diagnosed and suspected tuberculosis, their contacts, and other infected persons, for purposes of

surveillance and to assist local boards of health, tuberculosis clinics, and physicians in the management and follow-up of patients.

- Statewide surveillance of tuberculosis through five regional, nurse-directed Tuberculosis Surveillance Areas that offer public health nursing consultation, health education, and bilingual and other outreach services for the follow-up of patients.

- Participation in the National Consensus Conference on Tuberculosis to establish workable policies, procedures, and guidelines for the control of tuberculosis in the United States.

## DENTAL HEALTH

The Division of Dental Health, responsible for the prevention and control of oral disease in Massachusetts, continued its work in the following areas:

- *Prevention of Oral Disease*—The Division continued to make great strides in promoting fluoridation during the fiscal year. Funds from the Preventive Health Services Block Grant were used to assist the fluoridation activities of cities and towns. The Division purchased equipment or fluoride compound for 22 communities with a combined population of approximately 650,000 that had initiated fluoridation during the past two years. Assistance was given to seven local boards of health representing over 300,000 people in communities that were considering fluoridation. With the start-up of fluoridation in Lynn, Rockport, and Manchester (combined population of 95,000), Health Systems Agency (HSA) VI became the first HSA in the state to become fully fluoridated. To ensure that fluoridating communities maintained an optimum level of fluoride, the Division of Dental Health held a training session for water operators and continued its proficiency testing program. Of the 102 communities that were monitored, 92 fell within the optimal range and an overall mean of 0.97 parts per million (ppm) was maintained. By the end of the fiscal year, over 3.1 million residents were receiving the benefits of fluoridation. An estimated savings of \$45 million in dental care costs was realized because of fluoridation's preventive effect.

Enrollment in the school-based Fluoride Mouth-Rinse Program, in its fifth year of operation, increased by 30 percent to bring the total number of children to 78,000 and the number of communities to 159, an increase of 45 percent over the previous fiscal year.

The Division, with support from the federal Office of Maternal and Child Health, began a new prevention program in fiscal 1984 to promote the use of dental sealants for prevention of tooth decay among children. During the year, 13 neighborhood health centers in Boston were given funds to provide sealants to 1,500 children at the centers and at two neighborhood schools. The Division trained over 300 dentists and hygienists to apply sealants. Massachusetts Dental Service

Corporation, Blue Cross/Blue Shield's dental program, agreed to the Division's request that the costs of the sealant process be included as a covered benefit.

•*Dental Care*—The Division was instrumental in ensuring that the dental needs of publicly supported groups were met. The Division contracted with Tufts University Dental School to operate seven dental clinics on the grounds of the state schools and at the Lemuel Shattuck Hospital for a specialty inpatient service. It also contracted with the National Foundation for Dentistry for the Handicapped (NFDH) to provide preventive care, case finding, and referral services for developmentally disabled persons living in community settings, and established a treatment fund to purchase care from community dentists for clients not eligible for Medicaid, or for specialized services not covered by Medicaid.

During the year, 5,797 clients were treated at the state school clinics, which provided over 24,000 patient visits, an increase of 500 visits over the previous year. In the community, 7,000 clients received services through the NFDH contract, and over 350 were directly served through the Treatment Fund. Having identified Cape Cod as an area where the developmentally disabled were not being adequately served, the Division worked with the Barnstable Health Department to establish a dental program in the area. Since mid-year, over 400 clients have been served through the program.

The Division was given responsibility for the dental care of clients of the Department of Youth Services (DYS). A program to provide services at the Shattuck Hospital and at DYS facilities was developed. A program to improve dental care for institutionalized and homebound elders was also begun with support from the Area Health Education Centers of the Merrimack Valley and Southeastern Massachusetts. Eighty-three dental providers were trained and two sets of mobile equipment purchased to be used for treatment visits at nursing homes in the two areas of the state.

•*Research and Evaluation*—At the request of the Department of Correction, the Division developed a needs assessment of prison inmates to determine their oral status, treatment needs, and attitudes toward dental care. A plan of treatment will be completed for implementation in the next fiscal year.

With support from the statewide Area Health Education Center, the Division provided continuing education training sessions for dental hygienists. In addition, the Division continued to provide training in public health dentistry to residents and students of the Harvard and Tufts Schools of Dental Medicine. Research was begun into the harmful effects of smokeless tobacco, the feasibility of licensing for-profit dental centers, and oral cancer.

## DIVISION OF ALCOHOLISM

The Division of Alcoholism seeks to address the problems of alcohol abuse and alcoholism in Massachusetts through a

combination of primary, secondary, and tertiary prevention efforts. An estimated 300,000 persons in the state suffer from alcoholism. When members of families are included, the number of people affected by alcoholism increases to nearly one million who require assistance in their daily living.

•*Primary Prevention*—The cornerstone of the Division's prevention efforts is the Regional Primary Prevention Center system. Eight regional centers continued to provide a broad network of prevention resources and quality educational services. During Christmas and New Year's, the centers collaborated in a media campaign that emphasized "good hosting tips" and "safe ride" programs. The Centers also collaborated on a Youth and Alcohol Conference, which attracted many community providers. The third annual Prom Campaign was expanded during the year. On a statewide basis, 97,092 students, 1,965 teachers, 318 school administrators, and 2,536 parents were directly involved in the planning and implementation of the program, in which 227 school systems participated.

The Coalition to Reduce Drunken Driving, of which the Division is a participant, was instrumental in sponsoring legislation requiring commercial driving schools to include a minimum of six hours of alcohol education in their curriculum and to have at least one instructor trained in alcohol education.

Two new developments of importance to youths and minorities occurred in fiscal year 1984. In October 1983, the Division and the Governor's Advisory Council cosponsored an all-day conference on teenage alcohol abuse, an initial step in organizing a network of professionals with a shared commitment to solving the problem of adolescent alcohol abuse. Secondly, a Black Providers Task Force was formed to examine the issues of Blacks, Hispanics, and other minorities relative to alcoholism services.

•*Secondary Prevention (Early Intervention)*—Through its secondary prevention programs, the Division aims to reach problem drinkers or alcohol abusers at the earliest possible intervention point. Specially targeted populations such as women, youth, Blacks, Hispanics, and the elderly received attention through selected projects designed to meet their treatment needs.

The Division also supervised 28 driver alcohol education programs for first offenders arrested under the drunk-driving law. The Division assisted with the 14-day treatment program for second offenders at the Department's Rutland Heights Hospital. Because the demand for services now exceeds capacity, the Division has been working on the development of two additional sites, one in western Massachusetts and another in eastern Massachusetts, which will add 100 beds to the system.

The Division expanded its support of the Massachusetts Employee Assistance Program to cover additional state employees. The Division also provided technical assistance to early intervention employee assistance programs in both the public and private sectors.



In fiscal year 1984, the Department received an additional \$200,000 from the Legislature to develop a plan to prevent Fetal Alcohol Syndrome (FAS). The Division sponsored workshops, developed and distributed educational material on FAS, and launched a major media campaign to increase public awareness and understanding of Fetal Alcohol Syndrome. The Boston University School of Medicine and the Eunice Kennedy Shriver Center negotiated contracts with the Division for both fiscal years 1984 and 1985 to provide training, consultation, and evaluation for health care providers who come in contact with expectant mothers and at-risk newborns.

•*Tertiary Prevention*—During fiscal year 1984, the Division supported the following tertiary prevention projects: 49 halfway houses, 23 detoxification centers, 47 outpatient programs, and 2 public inebriate programs. In addition, the Division initiated several projects, including a public inebriate project/shelter funded jointly by the Department of Public Welfare and the Division of Alcoholism, and a special residential project for youth cofunded by the Divisions of Alcoholism and Drug Rehabilitation.

The Division of Alcoholism's prevention efforts have had a positive and constructive effect on the problem of alcohol abuse and alcoholism as demonstrated by a decline in the number of deaths from cirrhosis of the liver and in the number of drunk-driving fatal accidents. In 1982, the deaths from cirrhosis of the liver declined to 744 as compared to the peak of 1,191 deaths in 1973, an impressive drop of 37.5 percent in one decade. During the same period, drunk-driving fatal accidents dropped from 857 to 613.

## DIVISION OF DRUG REHABILITATION

Since its transfer to the Department of Public Health in 1982, the Division of Drug Rehabilitation has concentrated on strengthening its provision of services and administrative capabilities. A new internal organization and a revitalization of regional program management have resulted in improved communication among the Division, providers, and the community.

During fiscal year 1984, the Division continued to fund seven categories of basic services:

•*Residential Detoxification Services*—The Division funded two programs to remove the medical risk involved in detoxification, and to prepare patients for continued treatment of drug abuse problems.

•*Outpatient Methadone Detoxification Services*—The Division funded five short-term programs (21 days) to prepare the opiate-addicted for continued, preferably drug-free, treatment.

•*Outpatient Methadone Maintenance*—The Division funded five programs for addicted persons who require chemotherapy beyond the 21-day detoxification, as well as a structured counseling program.



Photo by Jack Spratt, courtesy Spectrum House.

Group therapy session at Spectrum House, Westboro.

•*Residential Drug-Free Treatment*—The Division funded 11 programs for persons unable to remain drug-free while living in the community, and who need individual, group, and family counseling, family rehabilitative services, and after-care.

•*Outpatient Drug-Free Counseling Services*—Sixty-one programs were funded by the Division for drug dependent or abusing persons who can benefit from regularly scheduled counseling services on an individual, group, and family basis.

•*Prevention Services*—Forty-seven programs were funded by the Division to provide a wide range of activities designed to prevent persons from moving along a continuum of risk. Services included prevention education, community prevention activities, and intervention programs.

•*Special Projects*—The Division funded 17 special projects, which included vocational education, services for the pregnant addict, day treatment, and counseling for the incarcerated. In addition to the seven basic services, the Division funded 10 Specialized Job Training and Facility Refurbishment contracts.

Two important achievements during the fiscal year were:

•The improvement of service distribution, particularly for the Hispanic population and clients in the criminal justice system, through expansion of treatment and prevention services for Hispanics, and better communication and planning with the Department of Correction.

•A cooperative funding effort with the Division of Alcoholism for a short-term residential program as a major step toward improved coordination of service funding and delivery.



## ENVIRONMENTAL HEALTH SERVICES

The Bureau of Environmental Health Services includes the Environmental Hygiene Unit, the Radiation Control Program, the Division of Food and Drugs, Community Sanitation, and the Childhood Lead Paint Poisoning Prevention Program. Specialists in the Bureau identify and evaluate environmental hazards to human health and develop corrective measures to reduce such risks.

### ENVIRONMENTAL HYGIENE

The Environmental Hygiene Unit sought ways to reduce indoor air pollution, which has become an increasing concern among Massachusetts residents. During 1984, field studies were carried out for carbon monoxide, asbestos, carbon dioxide, and hydrogen sulfide, as well as for the physical parameters of temperature and humidity, which may affect the intensity of these pollutants.

The Unit responded to emergencies involving hazardous materials such as industrial solvents, polychlorinated biphenyls (PCBs), epoxy resins, and infectious waste. Some of the emergency responses resulted from a fire in a leather factory in Peabody, a fire at North Station, a spill of transformer fluid containing PCBs, and a fire in a research laboratory working with recombinant DNA. None of the accidents posed a threat to the public health.

The Unit also administered the urea formaldehyde foam insulation (UFFI) repurchase program. In 1984, the Department promulgated new UFFI repurchase regulations, which permit any owner of a UFFI-insulated building to request, through the Department, the removal of the insulation and subsequent restoration of the building at the expense of the installer or suppliers of the UFFI. Over 2,000 inquiries were received, and more than 650 requests for repurchase have been filed with the Department. Continued legal challenges to the regulations by the formaldehyde industry slowed progress to implement the regulations.

The Environmental Hygiene Unit is responsible for administering portions of the state's Right-to-Know Law. The Unit reviewed exemption for research laboratories and for manufacturers claiming trade secrets, and released information on Material Safety Data Sheets (MSDs) to medical personnel. The Unit also participated in 12 seminars for government agencies and industrial groups, and reviewed the training module developed as a model for employees. A telephone information service was also established.

### RADIATION CONTROL

The Radiation Control Program, which is responsible for protecting the public from both ionizing and nonionizing sources of radiation, carried out 1,300 surveys of diagnostic x-ray units in hospitals, private medical and dental offices, as



Photo by Robert Kalaghan.

Member of Radiation Control Program prepares Gamma Analysis Detection Equipment for testing environmental samples for low levels of radioactivity.

well as inspections of nuclear medicine departments and users of radioisotopes. A special survey program was conducted to study radiation safety efforts at approximately 100 universities and colleges. Program personnel also surveyed color TV receivers, video display terminals, devices that use lasers, sun tanning lamps, and various consumer products containing radioactive materials.

The major accomplishment of the Radiation Control Program for fiscal year 1984 was reducing radiation emitted by x-ray units throughout the state. Staff surveyed 2,433 dental x-ray units, of which 1,328 were giving a higher patient dose than the average. By recommending techniques to reduce exposure, the Program was able to prevent public exposure to over one million roentgens of radiation per year in the Commonwealth.

Another important accomplishment was adoption of the first public exposure regulation for radiofrequency and microwave radiation by any state. The regulation represented a positive effort to prevent harmful effects caused by exposure to nonionizing radiation and to help minimize public fear and concern by establishing state standards.

A continuing activity of the Program was the extensive environmental surveillance and inspection of fixed nuclear power stations — two in Massachusetts and one in Vermont on the Massachusetts border. Personnel visited the sites every week to ensure the proper operation of monitoring equipment. In addition, the Program participated in full-scale emergency response exercises at the three nuclear reactor facilities. Staff also conducted a series of training programs for emergency workers in the 10-mile emergency planning zones around the Pilgrim, Rowe, Vernon and Seabrook nuclear power plants to ensure the capability of the workers to perform their assigned functions in an emergency.

Staff of the Radiation Control Program, responsible for responding to radiation accidents and incidents throughout the Commonwealth, served as the principal coordinators of the Nuclear Incident Advisory Team (NIAT) and participated in monthly training sessions.

Staff also cooperated with the U.S. Nuclear Regulatory Commission (NRC) to locate and survey over 600 cast-iron table bases suspected of being contaminated with radioactive material accidentally smelted into the raw material. The Program found 196 table bases to be contaminated and removed them from public access. Exposure to the public from these contaminated table bases was minimal and presented no deleterious effects to the public health.

The Radiation Control Program maintained responsibility for approving plans for radiation protection for all facilities involved in construction, alterations or reconstruction. In addition, personnel served as primary control experts for other state agencies, such as the Departments of Environmental Quality Engineering, Energy, Public Safety and Transportation, and the Civil Defense Agency.

## COMMUNITY SANITATION

The Division of Community Sanitation monitors and enforces compliance with sections of the State Sanitary Code that relate to housing, recreational camps for children, and farm labor camps; reviews environmental and sanitation conditions for correctional facilities and local lock-ups; provides funding and technical assistance for rodent and nuisance control; inspects microwave ovens, and monitors water fluoridation facilities. Education is a critical part of the Division's services to Massachusetts residents, including both classroom and field instructions.

Considerable attention was devoted to housing quality during this reporting period (1984). More than 300 inspections of residential dwellings were conducted.

The number of complaints received by the Division about enforcement of the code by local enforcement agencies increased over the previous year. Problems surfaced in a number of communities, and the Department assumed jurisdiction for enforcement of the standards in nine cases.

Several of these cases subsequently resulted in criminal action against the owners.

The Division held a major statewide training session to explain changes in the code, with primary emphasis on new regulations dealing with asbestos repair and removal.

Primary responsibility for inspection of the recreational camps and issuance of licenses belongs to the local municipalities. During the summer, the Division inspected 46 of the 500 camps in the state. Staff provided a training program for Boston camp inspectors in March 1984 and made available prototype application and inspection forms. In June, staff conducted 15 on-site inspections of Boston camps as part of the training process.

Eighty-six camps reported 398 injuries, most of which were minor. One sports camp, however, reported an unusually high number of serious injuries and an investigation was initiated by the Division.

Staff of the Division also inspected and certified 33 farm labor camps with an occupancy of 299 workers. These camps are mostly in regions that grow cranberries and apples.

Staff of the Division inspected most of the 35 state and county correctional facilities twice during the year. Inspections showed that serious overcrowding continued to exist although the facilities were taking measures to improve sanitary conditions. Inspections of Department of Youth Services' facilities were carried out as part of the Office for Children's certification process.

The Division worked closely with the staff of the special legislative commission investigating suicides in municipal detention facilities. As a result of the commission's report, the Department has begun to draft regulations for the construction of new facilities and maintenance of old ones. Plans were approved during the year for the construction of eight new lock-ups.

Cooperating with the Division of Dental Health's Fluoridation Program, staff sanitarians performed quarterly inspections of the fluoridation equipment in the 102 communities with fluoridated public water supplies.

## CHILDHOOD LEAD POISONING PREVENTION PROGRAM

The Department's Childhood Lead Poisoning Prevention Program (CLPPP) has two major responsibilities: to prevent lead poisoning among children under the age of six, and to identify and provide rapid intervention services to children already affected by elevated blood-lead levels. Fiscal year 1984 recorded substantial progress.

Approximately 135,000 children, or 36 percent of all children between the ages of six months and six years, were screened. Laboratory staff analyzed 118,500 blood specimens for lead or erythrocyte protoporphyrin levels. Of these specimens, 2,600 (2 percent) had unacceptable levels of lead.



There was a 44 percent decline in the number of high-risk cases — 201 in fiscal year 1984 as compared to 359 in 1983.

As a result, more attention was directed to moderate-risk cases. The increase in screening and the decline in the number of high-risk cases can be attributed to more projects funded by the Maternal and Child Health Section of the Division of Family Health Services, which provided regular lead screenings, regular CLPPP inservice education seminars, daily counseling by pediatric health care providers, and more rapid and accurate laboratory analyses. Another factor is the increasing national and statewide concern about lead poisoning.

The regionalization of case management services, through the addition of five part-time public health nurses, has resulted in quantitative improvements in coordinated medical and environmental follow-up, and the inclusion of Class II, moderate-risk children for the first time. Of the 686 newly identified children enrolled during the fiscal year, 485 (71 percent) were Class II children. In all, the Division provided case management services to 1,126 children, nearly double the number served in the previous year. During the year, 334 children were discharged from the program after abatement of residential lead hazards and the return of blood levels to an acceptable status. At the close of the fiscal year, 953 children were still enrolled statewide.

During the fiscal year, CLPPP staff conducted 799 housing inspections, and inspected 295 day care centers.



Employee of Childhood Lead Paint Poisoning Prevention Program retesting for lead levels in household paint.

The Program has continued its educational efforts to prevent lead paint poisoning. It informed realtors, banks, and residents of the provisions of the lead law, which require lead inspections and deleading of residences upon transfer of property if a child under the age of six will reside in the dwelling. The Division also gave advice and monitored blood-lead screening activities in abrasive blasting operations performed in a number of public works projects.

Funding under the federal emergency supplemental appropriation, the Jobs Bill, allowed expansion in both the number of local projects funded and the level and scope of activities of the projects. The heightened cooperation and coordination between state and federally supported programs resulted in a more effective and efficient provision of services. A record 13,700 children received screening through door-to-door and fixed site activities. State-funded projects conducted 561 initial inspections and were responsible for the deleading of 366 units. Throughout the state, 846 units were deleaded by state and local projects in fiscal year 1984.

## DIVISION OF FOOD AND DRUGS

The goals of the Division of Food and Drugs, which fosters consumer protection, are:

- To ensure the citizens of the Commonwealth a wholesome and safe food supply.
- To prevent food-related illness.
- To protect consumers from unsafe, fraudulent or deceptive practices in the food, drug, medical devices, and cosmetic industries.
- To detect and eliminate the abuse of controlled substances in health care systems, drug establishments, and research institutions.
- To protect the public from potentially harmful chemicals and pesticides.
- To provide proper care and humane treatment of animals in research facilities.
- To help reduce prescription costs through identification of generic drug substitutions.

During fiscal year 1984, staff of the Division conducted more than 7,000 field inspections of seafood establishments, retail food stores, restaurants, bakeries, food processing firms, food warehouses, cold storage plants, and of drug establishments. Staff also spent over 800 hours destroying more than 53,000 illicit drug samples subsequent to final court actions.

The Division processed 448 complaints, 138 of which were referred to local boards of health or other appropriate agencies. Many of the complaints were related to food-borne illnesses and were investigated cooperatively by the Division, local health authorities, the Department's Division of Communicable and Venereal Diseases, and the State Laboratory Institute.



The Department embargoed 147 products in instances where there was sufficient evidence to suspect adulteration or misbranding. Destruction of the product was necessary in 45 cases.

Education has proven to be an effective tool in achieving compliance in the industries regulated by the Division. Educational seminars and workshops for local boards of health, industry, and Division staff were conducted during the year. The Division kept the general public informed about important issues of health and safety through press releases, a newsletter, the Division's telephone information line, and speaking engagements. The *Food and Drug Reporter*, a quarterly newsletter, carried articles on issues of policy and technical information to local boards of health, representatives of industry, and other interested persons.

During fiscal year 1984, the Division recorded several noteworthy achievements:

- Vigorous shellfish sampling and enforcement actions, conducted in cooperation with the Division of Law Enforcement, were effective in reducing the illegal distribution of shellfish and market samples with high bacterial counts. Monitoring programs for paralytic shellfish poisoning (Red Tide) prevented contaminated shellfish from reaching the consumer.

- A comprehensive inspection and sampling program in the milk industry led to strict enforcement of regulations and the destruction of products adulterated with antibiotics.

- Food salvage and reconditioning operations for food and consumer products were closely watched by the Division. The Division determined the suitability of these products for use by consumers after investigations and laboratory analyses.

- The investigational activities of the drug control unit resulted in 27 formal charges being brought against persons for drug diversions.

- Under a federal Food and Drug Administration (FDA) contract, the Division performed sanitary inspections at 300 food establishments to ensure proper manufacturing practices.

The Division of Food and Drugs developed and revised regulations and policies in a number of areas:

- *Ethylene Dibromide (EDB) Residues in Food*—Because EDB, a chemical pesticide used in the United States since 1948, was found to be a strong cancer-causing agent in animals, the Department adopted strict standards to limit the amounts of EDB allowed in foods sold in the Commonwealth. Local boards of health and the Department's Regional Offices worked with the Division of Food and Drugs in ensuring the removal of all products in violation of the standards.

- *Generic Drug Program*—Preparation for publication of the fifth edition of the state Generic Drug Formulary was begun in fiscal year 1984. The publication will add nearly 200 new interchangeable drug products to the existing list. Health care costs, in both the public and private sectors, will be substantially reduced through the generic drug program. Estimated savings for the Medicaid program in 1984 were \$1.5 million.

- *Administration of Medication in Community Settings*—The Division worked on regulations to allow nonlicensed personnel in mental health programs, after completion of a training program, to administer medications.

- *Prescription Privileges for Nurse Practitioners/Physician Assistants*—Legislation signed by the Governor on December 12, 1983, will improve access to medical care, especially for the elderly and patients with chronic illnesses, by extending to nurse practitioners and physician assistants caring for such patients privileges of writing prescriptions. During the next year, the Division will complete final regulations to implement the legislation.

- *Animal Research Regulations*—The Division established an Advisory Committee to assist the Department in formulating standards and criteria for a comprehensive set of regulations governing the use of dogs and cats for research and educational purposes.

- *PCBs and Bluefish*—Responding to the public's concern over residual levels of PCBs in bluefish, the Division of Food and Drugs, in cooperation with the Division of Marine Fisheries and the State Laboratory Institute, obtained and analyzed bluefish from Massachusetts waters. The Division notified the public of precautionary measures to take to reduce the intake of PCBs in fish, and also prohibited the sale of PCB-contaminated fish.

## HEALTH CARE SYSTEMS

The Bureau of Health Care Systems encompasses programs that aim to ensure sound health care for all people. Programs within the Bureau also have responsibility for preventing unnecessary expansion or renovations of health care facilities that add to health care costs in the Commonwealth.

## HEALTH CARE QUALITY

The Division of Health Care Quality ensures high-quality preventive, curative, and rehabilitative health care at reasonable cost in hospitals, nursing homes, rest homes, chronic renal dialysis units, ambulance services, clinical laboratories, clinics, blood banks, home health agencies, state schools and community-based intermediate care facilities for the mentally retarded. In fiscal year 1984, the Division licensed 701 facilities and certified 764 facilities and services as part of its overall efforts to establish and enforce minimum standards of care. Fifty-nine of the ambulance services were licensed to provide Advanced Life Support Services.

Through its activities, the Division plays an increasingly important role in protecting the health of the people of Massachusetts. A study conducted by the Division during the fiscal year estimated that, by correcting serious patient care problems in health care facilities, the Division removes at least 490,000 patients from risk each year.

During the fiscal year, the Division initiated a major program to protect patients in long-term care facilities from abuse, mistreatment, and neglect. A Patient Abuse Task Force developed guidelines to improve investigations and inform consumers, patients, and nursing home staff of the provisions of the state's Patient Abuse Statute. As part of its outreach effort, the Division sponsored a statewide conference on patient abuse attended by more than 1,000 health care professionals. The Division also completed initial production of a film on patient abuse developed to educate health care professionals. During fiscal year 1984, the Division investigated approximately 376 separate complaints of abuse, mistreatment or substandard care of patients at the facilities it licenses. It submitted reports of 110 justified complaints to the Office of the Attorney General.

The Division responded to five emergencies when patients' health and safety were in jeopardy. Emergency action included the appointment of a nursing home receiver in one case, procurement of protective court orders in conjunction with the Attorney General in three cases, and assistance in the transfer of 113 patients from five grossly deficient long-term care facilities.

The Division initiated action to revoke the licenses of four unsuitable operators of long-term care facilities, and to decertify 13 substandard nursing homes from the Medicaid Program. It also recommended Medicare decertification of two substandard hospitals and suspension of service for two clinical laboratories. In fiscal year 1984, the Division imposed

intermediate sanctions for the first time on a large scale, using 10 separate correction orders against substandard ambulance services, and prohibiting further admission to six long-term care facilities.

The number of complaints investigated by the Division has risen dramatically over the past two years — 196 complaints during the first six months of 1984, an increase of 100 percent over the same period in 1982 (Fig. 3). The average number of

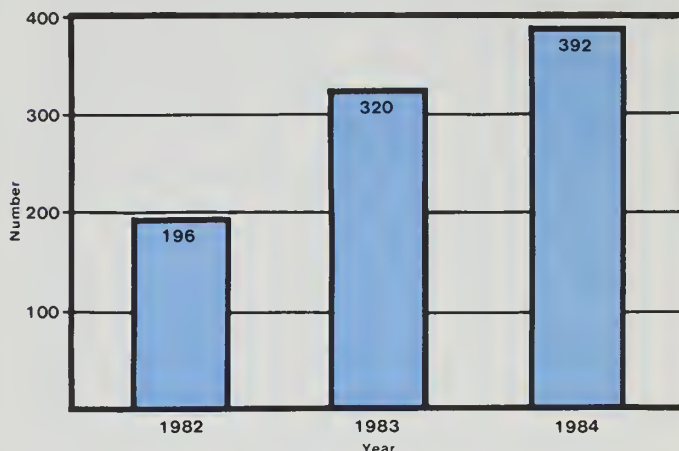


Figure 3. Total Number of Complaints Investigated by Division of Health Care Quality.

complaints of patient abuse received per month rose from 5.6 in 1982 to 13.6 in 1984. At the same time, the Division reduced the turn-around time between the initial receipt of complaints and transmittal of final reports from an average of approximately 105 days in 1982 to 60 days in 1983.

The Division worked closely with the Massachusetts Executive Office of Human Services and the federal Health Care Financing Administration to ensure the continued certification of eight state schools for the retarded. A report prepared by the Division detailed the regulatory basis for 26 buildings to receive approximately \$33 million in federal reimbursement funds at Fernald, Monson, Wrentham, Dever and Belchertown State Schools. Corrections made at the schools ensured that clients were living in buildings compliant with national fire protection standards.

### Program Development and Research

To respond to changes in the health care delivery system, the Division carried out research studies, evaluations of innovative projects and development of appropriate new or revised regulations. These included:

- Survey of approximately 1,200 rest home residents in 55 facilities to determine the relevance of current licensing standards to meet the needs of rest home residents.
- Collection of extensive patient-specific and financial data on coma and head trauma units in nursing homes to be used to determine whether the plan of care and services rendered in a head trauma unit are optimally provided in a nursing home setting.



- Evaluation of three innovative emergency medical care projects for delivery of advanced life support care.

- The initiation of inspection and license of 271 clinical laboratories in physicians' offices to ensure the accuracy of data used by physicians for diagnosis and monitoring treatment regimens.

#### Development of Regulations

To improve enforcement capabilities and to make more efficient use of existing staff and resources, the Division promulgated extensive revisions of its hospital licensing regulations. The revised regulations permit the acceptance of accreditation by private agencies in lieu of performing a complete licensure inspection, with a resultant reduction in duplicate inspections. These changes have resulted in a saving of field staff time, thus enabling the Division to devote resources to investigation of complaints, and to monitoring and enforcing standards.

During fiscal year 1984, the Division also drafted revisions of its clinic licensure regulations. The Division was involved in the regulation of new modes of health care, providing extensive consultation to seven hospices and developing regulations for birth centers. New regulations for licensing birth centers, promulgated in December 1983, established staffing and equipment standards, standards to protect clients using birth centers in case of an emergency, and guidelines for determining whether a pregnant woman is at low risk and therefore eligible to use the services of a birth center. Massachusetts is now one of 13 states that license birth centers.

The Division continued to be involved in ensuring appropriate utilization of existing facilities. Staff completed level of care assessments of 5,000 patients in the state's licensed and public chronic disease and rehabilitation hospitals, and determined that 49 percent of all patients did not need the hospital level of care and could be appropriately served by nursing homes. The study will be used by the Executive Office of Human Services, Office of State Health Planning, in drawing up plans for appropriate utilization of the state's chronic disease hospitals.

The Division also convened a subcommittee of its Long-Term Care Advisory Committee to develop a method for identifying patients in need of extensive nursing care in nursing homes. Successful identification of these patients is crucial not only to developing a methodology for providing additional reimbursement to facilities that accept such patients but also to their placement in nursing homes rather than in chronic disease hospitals.

## DETERMINATION OF NEED

The primary goal of the Department's Determination of Need (DON) Program is to ensure the people of the Commonwealth appropriate access to good quality health care at the lowest reasonable cost. Through the DON Program, the

Department evaluates proposals of health care facilities for establishment or expansion of services, modernization of plants, and procurement of equipment.

During fiscal year 1984, Program staff completed reviews of 137 proposals. Of the \$96.7 million in annual operating costs associated with these proposals, \$71.9 million (74 percent) of the costs were approved; \$24.8 million (26 percent) of the costs, which would have entered the health care system, were found to be unneeded. Despite the improvement in the review process, the backlog of applications increased slightly over the previous year. This situation resulted primarily from a record high number of nursing home applications, particularly in western and southeastern Massachusetts, and a substantial number of proposals for ambulatory surgery centers submitted in response to the interest and incentives of third party payers and the Commonwealth.

Among the completed reviews were: major plant modernization projects for two large Boston hospitals; the first free-standing inpatient hospice, approved only after a thorough investigation of potentially lower cost alternatives; expansion of alcoholism treatment programs in two hospitals in the Worcester area; and expansion of services to the largely underserved pediatric psychiatric population, including proposals for Boston tertiary facilities, as well as suburban community hospitals.

Other important developments during fiscal year 1984 included:

- *A New Approach to Evaluation of Applications*—Strong consideration was given to incremental operating costs, including staffing, rather than to just the analysis of capital costs.

- *Adoption of Guidelines for the Ranking and Budgeting of DON-Related Increases to Hospital Costs*—In August 1983, the Department adopted specific guidelines for the filing cycle beginning September 1, 1983, which established a \$54 million target as the ceiling for hospital-related DON applications.

- *Increasing Efficiency of Reviews*—To maintain thorough reviews of costly projects and to reduce the backlog of DON applications, the DON office revised and updated filing procedures and instructions to produce more and consistent information. In addition, the Program has taken steps to obtain automated data processing capability to manage more efficiently its important information base.

- *Updating Methodologies*—The DON Program played a major role in updating methodologies for evaluating ambulatory surgery, computerized tomography (CT) scanning, mental health clinics, alcoholism services, digital radiography, and management information systems. The Program also participated in establishing current policy for nursing homes, nuclear magnetic resonance, hospital plant renovation, acute medical-surgical bed need, chronic end-stage renal dialysis, and hospital corporate restructuring.

• **"Group Reviews"**—The increased use of "group reviews," in which a small group of staff analysts simultaneously evaluate a number of like applications, has moved the program toward greater efficiency with limited resources.

## EMERGENCY MEDICAL SERVICES

The Office of Emergency Medical Services (OEMS) coordinates the state's emergency medical system to reduce morbidity and mortality from sudden illness. Working with the Division of Health Care Quality, the Emergency Medical Care Advisory Board, and the Regional EMS Councils designated by the Department, the Office participated in the delivery of effective emergency care by:

- Setting and enforcing standards to ensure quality medical care for emergency patients.
- Training and certifying prehospital and emergency department personnel.
- Monitoring the scope and quality of care provided.
- Educating the public in life-saving procedures.

The major accomplishments of the Office in fiscal year 1984 included improvements in public health through four programs or services:

### Prevention, Early Intervention, and Service Coordination

In fiscal year 1984, the program for coordinating the development of prevention and early intervention programs was strengthened by the designation of six Regional Councils by the Department. Working with these councils, the OEMS organized and supported a wide range of activities to improve access to care, ensure the quality of system response, and to link organizations that serve emergency patients. Improving citizen access has been an important objective of these efforts. By the end of the fiscal year, 38 percent of the population was covered by 9-1-1 access systems. Consistent with the national objective, the Commonwealth is aiming for 91 percent coverage by 1991.

### First Responder and Basic Life Support

Massachusetts EMS legislation required the training of all public safety officers as First Responders and the training and certification of ambulance service personnel as Emergency Medical Technicians (EMTs). More than 1,800 First Responders were trained in 1984, and 1,875 persons were trained as Emergency Medical Technicians, 1,125 of whom were certified as EMTs through 109 EMT courses. Continuing education needs have been met through 1,820 refresher and continuing education programs.

### Advanced Life Support

Advanced Life Support (ALS) Services, which provide sophisticated treatment to victims at the scene of accident or illness, require specially trained advanced EMTs and medical control provided through emergency physicians at affiliated hospitals. OEMS reviewed and approved 13 ALS training pro-

grams (up from nine in 1983), nine refresher courses (up from four), and 386 continuing education courses, a substantial increase over the 44 courses given in the previous year. Five of the ALS training courses were supported through the Preventive Health Services Block Grant.

By the end of the fiscal year, 64 of the 331 licensed ambulance services in the state were providing intermediate level service, and 32 were providing paramedic level service to 65 of the 351 municipalities in the state. This coverage was provided to over 1.5 million people, 27 percent of the population. Of the 11,000 Emergency Medical Technicians in Massachusetts, approximately 250 were intermediate EMTs, and 213 were paramedics.

### Hospital Emergency Department and Definitive Care

OEMS was also involved in triage and treatment of patients in emergency departments and in critical care services. During the fiscal year, six Central Medical Emergency Direction Centers continued in operation in four regions and two were established in two other regions. The system handled more than 40,000 calls in 1984 and provided the link from ambulance to hospital, and from hospital to hospital. Professional education included a program on the treatment of victims of violence for emergency department nurses and physicians, and the initiation of a comprehensive program on pediatric emergencies that trained more than 100 emergency department nurses. The Critical Care Emergency Department Nurse Education Program trained 150 nurses, to bring the total trained in the 10-year history of the program to more than 1,200.



Photo by Patty Lord, courtesy Department of Health and Hospitals.

Members of Boston's Department of Health and Hospitals, EMS team, receive Stork Pin Awards from Frank Keslof, Director, Office of EMS, for saving life of an infant during complicated emergency home birth.



## HEALTH STATISTICS AND RESEARCH

The Division of Health Statistics and Research carried out its major functions of collecting, analyzing, interpreting, and disseminating statewide data on vital events (births, deaths, marriages, divorces, and induced abortions), cancer incidence, and licensed health facilities. As the officially designated Massachusetts State Center for Health Statistics, the Division fulfilled its broader responsibility to coordinate health data among agencies that collect and use such data, to provide statistical standards and technical assistance to users of health and demographic data, to identify trends so that programmatic responses could be initiated, and to serve as a clearinghouse for information on resources of public health data. In addition, the Division continued to make improvements in both basic data collection systems and analytic capabilities.

During fiscal year 1984, the Division recorded the following accomplishments:

- The Registry of Vital Records and Statistics processed and analyzed reports of approximately 250,000 births, deaths, marriages, divorces, and abortions, which were summarized in the *Annual Report of Vital Statistics*. In addition, the Registry verified approximately 150,000 legal copies of vital records, processed 10,000 amendments and corrections, provided 50,000 certified records and 30,000 medical research and abstract copies of records, and provided technical assistance to 3,500 lawyers and representatives of state and federal agencies and to 7,000 genealogists who regularly use the records.
- In an effort to increase efficiency and reduce response time to public inquiries, the Registry of Vital Records and Statistics began implementation of plans for the complete automation of its activities.
- The Massachusetts Cancer Registry released its first annual report, *The 1982 Annual Report of Cancer Incidence* (Fig. 4). Patterns of cancer by town were available for the first time.

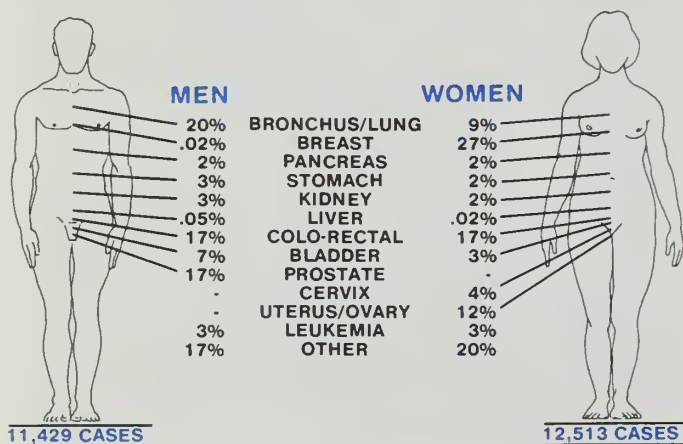


Figure 4. Cancer Incidence in Massachusetts, 1982.

The most important finding was the high number of cases of lung cancer, especially in women, throughout the state. Findings of excess cervical cancer in southeastern Massachusetts may lead to increased public education on the need for widespread screening. As a result of another finding, a kidney cancer study in the Merrimack Valley is scheduled to begin in fiscal 1985.

- Cancer Registry data continued to be a resource for other divisions of the Department, principally Environmental Epidemiology and Toxicology, in investigations of cancer incidence in cities and towns. Cases of Kaposi's sarcoma were reported to the Division of Communicable and Venereal Diseases, summaries of childhood cancer incidence prepared for the Division of Family Health Services, and statistical analyses of incidence of oral cancer carried out with staff of the Division of Dental Health. Numerous requests were received from citizens, health professionals, and the media; available data were provided when appropriate.

During the year, the Cancer Registry completed quality assurance reviews at the remainder of hospitals not visited in the previous year. It also completed the computerized edit/update program.

- The Health Resources Statistics Unit made progress in eliminating the severe backlog in health facilities data that has existed for several years since the National Center for Health Statistics ceased funding the collection of statewide data. As a result, all users of data in the state were able to receive updated information. To improve ease of access to surveys of previous years and to reduce the volume of paper stored in the Unit, staff began the microfilming of all 1973 to 1980 health surveys.

- In addition to collaborative activities with other Department divisions and with the Center for Health Promotion and Environmental Disease Prevention, the Research and Epidemiology Unit completed several research reports during the fiscal year: *The Impact of Years of Life Lost in Massachusetts* (1979-1981), *Cesarean Birth in Massachusetts*, and the *Massachusetts Health Status Indicators*. A paper on the relationship of health status and economic factors to health promotion programs was also prepared.

- The Research and Epidemiology Unit prepared a prospectus that outlined possible epidemiologic approaches to the study of the relationship of video display terminals to reproductive outcomes, which was submitted to the National Institute for Occupational Safety and Health.

- In addition to processing over 100 data requests per month and providing regular consultation to several other Department units and other state agencies on computer programming and data management, the Public Information/Data Management Unit completed programming projects and focused on improvements in the Division's data collection and management system.

- In June, the Division began publication of a quarterly newsletter, *Data Notes*, to be distributed to over 1,000 users of data both within and outside state government.

The sound basis of scientific knowledge and analytical procedures that have been established at the State Laboratory Institute proved invaluable as the Department was frequently called upon during the year to determine a course of action for management of complex health problems. Through its continuing efforts in applied research and development, the State Laboratory has developed effective technologies to assess health risks rapidly, and has been a pioneer in the production of intervention materials. Health services are provided by four major program divisions at the Institute: Biologic Laboratories, Newborn Screening Program and Laboratories, Diagnostic Microbiology Laboratories, and Food and Environmental Laboratories. Forensic services are provided by the Drug Analysis Laboratories. Table 1 summarizes the activities of the State Laboratory Institute.

Table 1.  
STATE LABORATORY INSTITUTE  
Laboratory Services  
July 1, 1983 - June 30, 1984.

| Program (unit of measure)               | Number  |
|---|---------|
| Biologics (immunizing doses produced)   |         |
| Serums                                  | 79,500  |
| Vaccines                                | 867,640 |
| Total number of human doses             | 947,140 |
| Newborn Screening (children tested)     |         |
| Massachusetts                           | 77,488  |
| Other New England states                | 84,972  |
| Total number of children screened       | 162,460 |
| Microbiology (samples tested)           |         |
| Bacteriology                            | 131,663 |
| Mycobacteriology                        | 30,120  |
| Virology and rabies                     | 12,261  |
| Serology                                | 122,501 |
| Clinical investigations                 | 5,370   |
| Total number of samples                 | 301,915 |
| Food and Environmental (samples tested) |         |
| Food safety                             | 10,495  |
| Environmental                           | 800     |
| Total samples tested                    | 11,295  |
| Drug Analysis (samples tested)          |         |
| Cocaine                                 | 7,814   |
| Heroin                                  | 7,206   |
| Marijuana                               | 43,753  |
| Other controlled substances             | 10,418  |
| Total samples tested                    | 69,191  |

BIOLOGIC LABORATORIES

The Biologic Laboratories manufacture, test, and develop biologics to assure the availability of human vaccines and serums to Massachusetts residents. During fiscal year 1984, the Biologics Laboratories produced three immunizing agents and maintained a secure production capacity for diphtheria, tetanus, pertussis (DTP) childhood vaccine, the cornerstone of children's immunization programs. The three new immunizing agents are:

•*Varicella Zoster Immune Globulin (VZIG)*—The laboratories expanded production of this unique serum that is used to prevent chickenpox in children with leukemia, pregnant women, and other high-risk groups. Massachusetts serum is distributed nationally through the American Red Cross.

•*Cytomegalovirus Immune Globulin (CMVIG)*—Clinical trials were continuing for CMVIG, which prevents a deadly viral infection in premature infants and other high-risk groups. Licensure is expected within two years.

•*Bacterial Polysaccharide Immune Globulin (BPIG)*—Continued clinical trials of the serum indicated that it may protect children from such life-threatening bacterial infections as meningitis, pneumonia, and otitis media (middle ear infections). Licensure of the product for general use is expected within three years.

The Biologic Laboratories, which have been in use since 1914, and were last updated in 1956, were undergoing major renovations scheduled to be completed in January 1985. Vaccine stores had been increased before the start of the \$1.6 million renovation project to ensure availability during shut-down caused by construction.

NEWBORN SCREENING

The Newborn Screening Program and Laboratories provide accurate, rapid diagnosis of inborn errors of metabolism and of hypothyroidism and clinical follow-up for the determination of the most effective means of treatment.

Despite decreases in federal funding for newborn screening over the past four years, all newborn screening services continued to be offered. Support for the core testing services of screening newborns for phenylketonuria (PKU) and hypothyroidism was provided by redirected state funds within the State Laboratory budget. Funding from the National Institutes of Health permitted follow-up of afflicted children to determine the effectiveness of treatment. Screening of Massachusetts newborns for other metabolic disorders that are detected in urine samples has completed its third year on a fee-for-service basis. Screening of newborns from other New England states is also carried out at the Massachusetts



Table 2.  
Regional Newborn Screening Program  
Children Screened for Hypothyroidism  
July 1, 1983 - June 30, 1984.

| State         | Children Tested | Number Identified as Hypothyroid | Annual Incidence Rate per 100,000 |
|---------------|-----------------|----------------------------------|-----------------------------------|
| Connecticut   | 41,643          | 12                               | 28.8                              |
| Maine         | 15,914          | 5                                | 31.4                              |
| Massachusetts | 77,488          | 17                               | 21.9                              |
| New Hampshire | 14,369          | 4                                | 27.8                              |
| Rhode Island  | 13,046          | 7                                | 53.7                              |
| <b>Total</b>  | <b>162,460</b>  | <b>45</b>                        |                                   |

Table 3.  
Regional Newborn Screening Program  
Children Screened for Metabolic Disorders\*  
July 1, 1983 - June 30, 1984.

|               | Children Tested | Number of Metabolic Disorders Identified |          |          |          |
|---------------|-----------------|--|----------|----------|----------|
| Maine         | 15,914          | 2  | 1        | 0        | 0        |
| Massachusetts | 77,488          | 6  | 0        | 3        | 0        |
| New Hampshire | 14,369          | 3  | 0        | 0        | 0        |
| Rhode Island  | 13,046          | 3  | 1        | 0        | 0        |
| <b>Total</b>  | <b>120,817</b>  | <b>14</b>                                | <b>2</b> | <b>3</b> | <b>0</b> |

\*Connecticut Health Department tests children for PKU and other metabolic disorders.

\*\*PKU = phenylketonuria; GAL = galactosemia; MSUD = maple syrup urine disorder; HCYS = homocystinuria.

laboratories on a fee basis (Tables 2 and 3). Testing of newborns on a regional basis for these diseases, which cause severe illness in children if not detected for early treatment, has been recognized as prudent public health practice. Because the Massachusetts laboratories test such large numbers of children, the Newborn Screening Program has been able to provide tests of high quality at a low unit cost.

## DIAGNOSTIC MICROBIOLOGY LABORATORIES

The Diagnostic Microbiology Laboratories analyze clinical specimens to determine the cause of severe illnesses due to communicable diseases, and to guide correct treatment and effective preventive measures. A wide range of infectious disease services were provided through seven programs.

•*The Virology Laboratory* served the clinical needs of the Massachusetts medical community for the diagnosis of common and unusual viral infections, and conducted surveillance programs for influenza and eastern encephalitis, as well as for measles, mumps, and rubella. During the past year, significant advances were made by the Virology Laboratory in the application of fluorescent antibody techniques for the rapid diagnosis of disease, particularly effective in the diagnosis of human eastern encephalitis.

The laboratory received 11,418 specimens for analysis, which resulted in over 30,000 discrete examinations. With expanded laboratory capabilities for the identification of herpes virus infections, the laboratory was able to test significantly more specimens. The Virology Laboratory continued to test thousands of mosquitoes for eastern encephalitis.

•*The Rabies Laboratory* analyzed 843 animals that were suspected of being rabid and provided emergency testing

services to ensure any citizen exposed to rabies prompt and appropriate treatment. The only significant animal reservoir for rabies virus in Massachusetts was the bat. Of the 208 bats submitted to the laboratory, 16 (7.7 percent) were found to carry rabies virus. Because rabies has been spreading up the Atlantic coast via other species such as raccoons, the Rabies Laboratory has maintained intensified surveillance.

•*The Serology Laboratory* analyzed 122,501 samples for evidence of syphilis infection. Data from the tests directed treatment of, and prevention efforts for, syphilis through the Department's Venereal Disease Control Program.

•*The Bacteriology Laboratory* provided diagnostic services to physicians, clinics, and state and local health officials for the identification of bacterial pathogens. The Special Reference Program tested 3,484 samples for unusual and difficult-to-identify bacteria such as the Legionnaires' disease organism (19 cases in 360 tests), pertussis (24 cases found in 154 samples submitted), and listeriosis. In July 1983, the laboratory was able to detect an unexpected increase of listeriosis and alerted state epidemiologists.

The Enteric Pathogens Program, important in the control and prevention of foodborne illness, tested 12,775 specimens and identified 8,476 pathogenic bacteria, an increase in both the number of samples tested and in the number of positive results. The number of salmonella isolates from persons reporting food poisoning remained high, with 37 percent of tested cases confirmed. The extremely high rate of positive findings (68 percent) in suspected campylobacter infections reflected the recently developed improvements of the organism, now recognized as a major cause of food and water-borne illness. Outbreaks of salmonella infections occurred in a day care center, a nursing home, and two restaurants. Shigellosis was also diagnosed at a day care center.

The Throat Culture Program provided physicians and clinics with a rapid, accurate method of identifying group A streptococcal infections. The program tested 64,494 specimens and provided physicians with reports within 24 hours of receipt of the specimen.

The Gonorrhea Program tested over 49,000 specimens, which were received primarily from community health clinics. The program also served as a reference laboratory for hospitals and clinical laboratories for the identification of problem cultures.

The Mycology Program tested 537 samples for pathogenic fungi. Many of the infections caused by these organisms occur in chronic disease, hospitalized patients who have lowered defenses against infection by these common environmental organisms. Laboratory diagnosis of these rare illnesses—such as brucellosis, aspergillosis, and histoplasmosis—is essential to effective treatment.

The Parasitology Program, another specialized service provided to physicians throughout the state, examined 330 specimens. The most frequent positive finding was *Giardia lamblia*, the cause of giardiasis, a diarrheal disease that has now been added to the Department's list of reportable diseases.

•*The Mycobacteriology Laboratory* tested an average of 115 specimens per day from patients with severe respiratory illness. The primary pathogen of interest in this diagnostic laboratory is the tuberculosis bacillus. Because this class of microorganisms presents special risks to laboratory personnel, all work with the organism is done in a specially designed laboratory to protect workers from exposure.

•*The Laboratory Training Program* provided training and consultation to the 200 clinical laboratories in Massachusetts. Seven intensive training courses were taught in three specialty areas—clinical microbiology, laboratory safety, and laboratory management. The program is accredited by the American Society of Microbiology and can award continuing education credits.

•*The Clinical Investigations Laboratory*, formerly called the Hepatitis Reference Laboratory, expanded its services to respond to a demand for expert consultation and to fill a need for difficult diagnostic services for severely ill patients. The laboratory's staff completed the laboratory component of a study of the efficacy of the newly licensed hepatitis B vaccine. The study was conducted in a volunteer group of health care workers from seven Boston hospitals. Staff also coordinated two clinical trials of CMVIG produced by the Biologics Laboratories.

## FOOD AND ENVIRONMENTAL LABORATORIES

The Food and Environmental Laboratories analyzed foods to ensure freedom from contaminants and assayed en-



Photo by John McGonagle.

Staff of Diagnostic Microbiology Laboratories testing for hepatitis virus.

vironmental and human samples to detect the presence of harmful chemicals. During fiscal year 1984, the Food and Environmental Laboratories performed nearly 41,000 chemical, microbiological, and physical analyses of foods to ensure the safety and quality of the food supply. Human blood samples were analyzed to measure exposure to hazardous chemicals. Major efforts included:

•*Norwood PCB Incident*—The laboratory provided sophisticated analyses of blood samples from a group of Norwood residents who were living near a site that was contaminated with PCBs.

•*Bluefish Contamination*—A study conducted with the Division of Marine Fisheries assessed the level of PCBs in bluefish found in Massachusetts waters. Because bluefish have a high fat content, they have been found to store higher levels of PCBs than many other fish species. Surveillance will continue on an annual basis.

•*Carcinogens in Food*—The State Laboratory was one of several state laboratories that cooperated with the federal Environmental Protection Agency in analyzing contamination



Photo by John McGonagle.

Testing for EDB, Food and Drug Laboratories, State Laboratory Institute.



of foods with EDB, and contributed to the evaluation of contamination levels of the carcinogen in foods.

## FORENSIC SERVICES

The Drug Analysis Laboratories analyzed drugs confiscated in the illicit market by law enforcement agencies. More than

3,000 samples of cocaine were analyzed, and results used in criminal cases. Over 600 heroin samples were analyzed. Lysergic diamide acid (LSD) cases showed a significant increase in frequency in the past year. The geographic distribution of drug seizures indicated the widespread nature of the general problems of drug abuse, especially cocaine.

## COMMUNICABLE AND VENEREAL DISEASE CONTROL

The Division of Communicable and Venereal Diseases conducts health surveillance and disease control activities to guard the health of the people of the Commonwealth. This is accomplished through testing, vaccination, treatment, analysis of disease trends, and the assessment of threats to the people.

### COMMUNICABLE DISEASE CONTROL

The statewide immunization programs of the Department, which expanded as new vaccines became available, continued to record progress in controlling measles, mumps, and rubella:

- Measles*—Nine cases of measles, four of which were imported, were reported in calendar year 1983.
- Rubella*—Eight cases of rubella, four of which were imported, were reported in calendar year 1983.
- Mumps*—Twenty cases of mumps were reported in calendar year 1983, the lowest number ever

reported in Massachusetts, a drop of 55 from the 75 cases in 1982.

The Department will be able to maintain this record as long as it continues to immunize approximately 125,000 children each year with the measles/mumps/rubella (MMR) vaccine. This program has not only prevented illness and death, but has saved the Commonwealth over \$19 million annually in actual costs for medical care and institutionalization of patients.

Massachusetts has been polio free since the last case of polio was reported in 1968. The Commonwealth will continue to be polio free as long as the Department administers 450,000 doses of trivalent Sabin oral polio vaccine annually. The annual immunization survey of children (66,216) entering kindergarten in September 1983 showed that more than 99 percent had already received three or more doses of polio vaccine. The percentage of these children immunized against polio and the six other immunizable diseases showed impressive increases over 1974 (Table 4).

Table 4.  
Percentage of Immunized Children Entering Kindergarten  
1974 - 1984.

|         | '73-74 | '74-75 | '75-76 | '76-77 | '77-78 | '78-79 | '79-80 | '80-81 | '81-82 | '82-83 | '83-84 | Percent<br>Increase<br>Over<br>'73-74 |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------------------------|
| DTP*    | 88.6   | 93.51  | 95.04  | 96.21  | 95.82  | 96.99  | 97.57  | 98.10  | 97.88  | 98.37  | 99.15  | 11.91                                 |
| Polio   | 86.2   | 92.04  | 94.10  | 95.84  | 94.25  | 97.50  | 97.95  | 98.13  | 97.71  | 98.07  | 99.09  | 14.95                                 |
| Measles | 90.3   | 93.53  | 94.60  | 96.21  | 98.32  | 98.60  | 98.86  | 99.09  | 98.82  | 99.07  | 99.60  | 10.30                                 |
| Mumps   | 59.3   | 69.19  | 78.00  | 84.56  | 89.83  | 92.79  | 98.69  | 99.06  | 98.79  | 99.06  | 99.60  | 67.96                                 |
| Rubella | 62.0   | 70.41  | 78.51  | 84.55  | 90.04  | 93.22  | 98.67  | 99.06  | 98.79  | 99.06  | 99.60  | 60.65                                 |

\*DTP= Diphtheria, Tetanus, Pertussis (Whooping Cough).

During the 1983-1984 school year, the Division of Communicable and Venereal Diseases also surveyed more than 98,000 school health records of new children entering grades 1 to 12 in both public and private schools. Immunization levels for these children were: DTP, 97.78 percent; polio, 97.92 percent; measles, 98.93 percent; mumps, 98.69 percent; and rubella, 98.77 percent. The Division continued its survey of children (78,371) in day care centers and found increases in the rates of immunization over previous years (Table 5).

Massachusetts, which has eliminated diphtheria, tetanus, and polio, has almost entirely eliminated measles, mumps, and rubella. There were 40 cases of pertussis in children who were not immunized, or who had received less than three doses of pertussis vaccine. Within the next two years, pertussis should be eliminated.

During fiscal years 1982 and 1983, the Division conducted serologic surveys among a random number of students in grades 1, 6, 8, and 12, under a contract with CDC to determine the persistence of antibodies against measles, mumps, and rubella. The survey found that 98 percent of the students had neutralizing antibodies against measles and rubella more than 12 years after immunization. The testing for mumps antibody has not been completed. The 98 percent effectiveness of the measles/mumps/rubella vaccine indicates that the second dose of MMR vaccine is unnecessary, and will save the Commonwealth millions of dollars.

Since more and more of the cases of immunizable diseases in Massachusetts are coming from other states and countries, state legislation was recently introduced requiring college and postgraduate students coming to the state to be immunized against diphtheria, tetanus, polio, measles, mumps and rubella. The bill, when enacted, will be effective in September 1985 and will greatly reduce the incidence of imported, immunizable diseases.

The Division accurately predicted a severe influenza season for Massachusetts. Reports of laboratory-confirmed influenza began during the first week of January 1984 and continued at an unusually high rate throughout the season. Approximately 1.5 million cases of influenza were reported statewide among

all age groups. School children, college students, and young adults under age 25 were the most severely affected. A total of 37 communities experienced laboratory-confirmed influenza of epidemic proportions, and six other communities reported severe outbreaks.

The State Laboratory Institute confirmed three flu strains (A/Philippines, A/Brazil, and B/Singapore). Anticipating these strains, the Division distributed 242,510 doses of double-strength vaccine to protect persons most vulnerable to the adverse effects of influenza; 234,507 high-risk persons were vaccinated. As in the past three years, the influenza vaccine was well tolerated and reaction-free. Eighty percent of the flu shots were given to the elderly or nursing home residents, who experienced an unusually low incidence of influenza. Preliminary data from the Department indicated a reduction of 52 percent in the pneumonia and influenza death rate as compared to the state's last flu epidemic during the 1980 to 1981 season. As the immunization rate has increased among high-risk residents, the mortality rate from both pneumonia and influenza has decreased.

During fiscal year 1984, three cases of babesiosis, a malaria-like disease, were reported and investigated.

Six cases of eastern encephalitis were reported in patients living in southeastern Massachusetts, whose ages ranged from 11 to 65. Two of the patients died and three recovered without neurologic or psychiatric damage.

Seven cases of Lyme disease, which is caused by a spirochete responsive to penicillin and other antibiotics, were reported.

#### Acquired Immune Deficiency Syndrome (AIDS)

Reporting of cases of Acquired Immune Deficiency Syndrome (AIDS) to the Department was made mandatory on November 10, 1983. All cases of AIDS are reported directly to the Department as a special disease. Forty confirmed cases of AIDS were reported in the state through calendar year 1983, as compared to 16 cases in calendar year 1982. The 40 cases were Massachusetts residents plus 10 out-of-state residents living in Massachusetts. The Division has had ongoing discussions with the homosexual community, Haitian community, health providers, the Red Cross, and other con-

Table 5.  
Percentage of Immunized Children in Day Care Centers  
1976 - 1984.

|         | 1975-76 | 1976-77* | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | 1982-83 | 1983-84 | Percent Increase Over 1975-76 |
|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|-------------------------------|
| DTP**   | 86.73   | —        | 90.99   | 94.23   | 95.60   | 95.94   | 96.29   | 96.77   | 97.55   | 12.48                         |
| Polio   | 85.71   | —        | 89.83   | 94.91   | 96.13   | 96.70   | 96.87   | 97.52   | 97.98   | 14.32                         |
| Measles | 89.31   | —        | 93.22   | 95.83   | 96.79   | 97.54   | 97.83   | 98.11   | 98.78   | 10.60                         |
| Mumps   | 77.27   | —        | 85.93   | 92.78   | 96.28   | 97.29   | 97.79   | 98.07   | 98.77   | 27.82                         |
| Rubella | 76.00   | —        | 85.36   | 92.46   | 96.27   | 97.31   | 97.77   | 98.03   | 98.78   | 29.97                         |

\*No survey had been conducted in 1976-1977.

\*\*DTP = Diphtheria, Tetanus, Pertussis (Whooping Cough).



cerned organizations to deal with this serious public health problem.

A Massachusetts AIDS Task Force, chaired by the Commissioner, was established by the Governor and the Executive Office of Human Services in the summer of 1983 to review and assess the state's monitoring, educational, and treatment efforts relating to AIDS. The Task Force and the Department jointly issued a brochure to assist physicians and health care providers in caring for AIDS patients.

## VENEREAL DISEASE CONTROL

In accordance with national standards, the Division of Communicable and Venereal Diseases has monitored 16 sexually transmitted diseases. Of these diseases, seven are epidemic in Massachusetts and in the nation—gonorrhea, nongonococcal urethritis, trichomonas vaginitis, monilial vaginitis, genital herpes, genital warts, and scabies.

The 10,000 cases of gonorrhea reported in calendar year 1983 represented a decrease of 2.2 percent over the previous year. Gonorrhea, however, continued to be the number one communicable disease in the state (Fig. 5).

For calendar year 1983, the reported number of cases of all stages of syphilis was 916, a decrease of 1.2 percent from the 987 cases in the previous year. Cases of primary and secondary syphilis accounted for 45 percent of the cases. Division staff in the 18 cooperating state venereal disease clinics interviewed 669 (94 percent) patients with early syphilis. A total of 1,269 sexual partners were found through the interview process and

992 persons (78 percent) were examined. The number of persons prophylactically treated as contacts was 512.

The federal grant for venereal disease control was \$426,800 for 1983. Main emphasis was on the screening of asymptomatic women for gonorrhea, and the refinement of an effective initiative for gonococcal pelvic inflammatory disease (PID). During calendar year 1983, the program examined 114,000 women for gonorrhea at approximately 100 participating facilities. Of the 114,000 women examined, 4,000, or 3.5 percent, approximately the same percentage as in the previous year, were found to have the disease.

The Division continued its program for the diagnosis, treatment, and epidemiology of PID. Protocols with standards for the diagnosis of gonococcal PID, which had been established by the Division, continued in over 30 hospitals located in areas of highest incidence. Measures for ensuring the rapid epidemiologic follow-up of contacts, many of whom were asymptomatic men, were maintained. During calendar year 1983, the 375 reported cases of gonococcal PID represented an 8 percent decrease from 1982.

The incidence of penicillin-resistant gonorrhea decreased from 98 cases to 93 in calendar year 1983. The majority of cases continued to be linked to prostitutes and their contacts located in Boston and adjacent communities. Intensive epidemiologic measures have been applied to prevent the spread of such cases throughout the state.

The 18 cooperating venereal disease clinics in the outpatient departments of general hospitals had 39,336 patient visits for examination and treatment during the fiscal year.

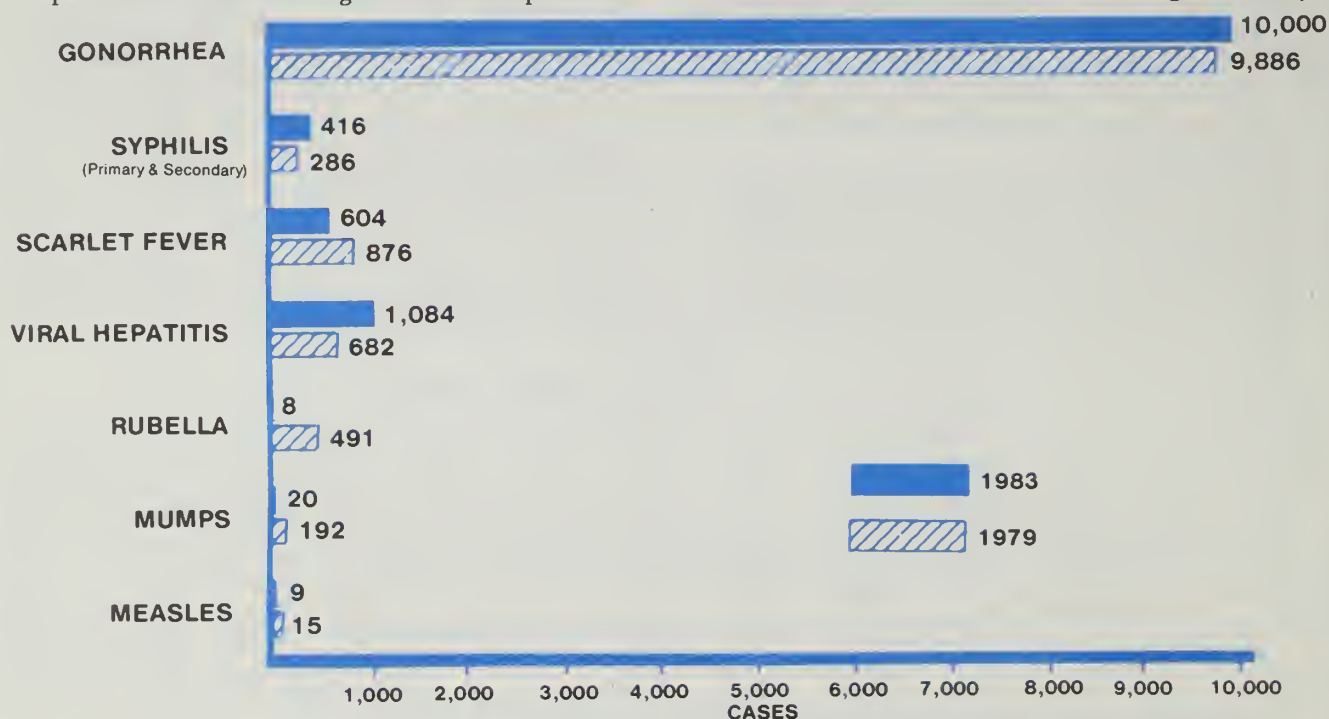


Figure 5. Incidence of Communicable Diseases in Massachusetts, 1979 and 1983.

## MANAGEMENT SERVICES

Management Services consolidates the activities of the Division of Data Processing, the Budget Office, the Office of Employee Relations, the Fiscal Office, the Division of Central Services, and the Office of Human Resources. These Divisions provide centralized administrative support services to the Department.

### DATA PROCESSING

The Division of Data Processing provides programming and data entry services to the Department's divisions and hospitals. It reviews all acquisitions of data processing services, equipment, and systems. The Division also coordinates the use of large-scale computer services, both at the Commonwealth's Bureau of Computer Services and at a private service bureau. Major projects in fiscal year 1984, which aim to increase efficiency and responsiveness, included:

- Transfer of 75 percent of the Department's private bureau processing to a Commonwealth data center.
- Assisting Divisions in the acquisition of seven microcomputers and in the development of default hardware and software standards.
- Assisting the Lemuel Shattuck Hospital in a complex evaluation of proposals for an automated billing system to be implemented in fiscal year 1985, to improve billing capabilities and thus increase state revenues.
- Conducting the first round of an automated data processing plan to identify the Department's present and future requirements for data processing and office automation, and evaluating alternate strategies now available for meeting these requirements.

### BUDGET OFFICE

The Budget Office supervised the preparation, implementation, and monitoring of the Department's \$130 million state budget. In addition, it continued to oversee the work of the Contracts and Revenue Units.

### EMPLOYEE RELATIONS

The Office of Employee Relations directed the collective bargaining program of the Department, held civil service hearings for Department employees, and represented the Commissioner before the Civil Service Commission.



Photo by Dennis Sterzin.

The Department's new headquarters at 150 Tremont Street in downtown Boston.

### FISCAL OFFICE

In addition to providing accounting services for \$175 million in state and federal funds, the Fiscal Office supervised the operations of the Payroll and Purchasing Units.

### CENTRAL SERVICES

The Division of Central Services coordinated the move of most of the Department's employees from five downtown locations to its new headquarters at 150 Tremont Street. The Division continued to provide core services such as production, mailroom, and telecommunications to the programs within the Department.

### HUMAN RESOURCES

The Office of Human Resources, formerly the Personnel Office, expanded its responsibilities to include not only the processing of personnel transactions but also employee benefits, recruiting and training, and affirmative action.



## REGIONAL AND LOCAL HEALTH OPERATIONS

The Office of Local Health Services and Regional Operations, established late in fiscal year 1984, was designed to strengthen the role of the Department's four Regional Health Offices and to improve communications with local boards of health. It is also charged with coordinating long-range planning for the six Public Health Hospitals and with broadening hospital activities in the community.

### REGIONAL HEALTH OFFICES

The four Regional Health Offices continued to coordinate the Department's general field activities and to act as intermediaries between central service programs, local health agencies, and citizen groups. As mandated by statute, the regional health officers act as representatives of the Commissioner of Public Health and are responsible for the implementation of the Department's programs and policies in their respective districts. The multifaceted activities and responsibilities of the regional offices can be summarized as follows:

- *Technical assistance*—for sanitary programs and consultations on communicable disease control, nursing, nutrition programs, childhood lead paint poisoning prevention, and other public health functions.

- *Regulatory*—enforcement of the state Sanitary Code and Food and Drug laws; inspection of prisons and certification of migrant labor and recreational camps.

- *Direct patient services*—provision of either direct services or contracted services with other medical agencies for programs of the Services to Handicapped Children, rehabilitation programs, family planning, and other programs of the Divisions of Family Health Services and Dental Health, and programs of the Center for Health Promotion and Environmental Disease Prevention.

- *Inservice educational programs*—for local boards of health, health care providers, voluntary organizations, and professional groups.

During fiscal year 1984, the Regional Health Offices worked to strengthen communication and cooperation with local boards of health and community groups, to organize new health promotion programs, and to plan and promote a greater sharing of regional resources. Examples include:

- *Central Region*—Staff carried out the following activities: housing inspections, 154; reinspections, 689; inspections of day care centers, 68; buildings deleaded, 181, a significant increase of 134 over the previous year. The addition of a part-time nurse to the Lead Paint Program has resulted in a more efficient follow-up of lead poisoned children — 135 since January 1984. In addition, 172 children were screened in kindergartens in Gardner and at the Milford Day Care Center. Inservice programs were made available to community health agencies in Gardner, Worcester, Fitchburg and Leominster, as well as to the Family Practice Residency Program at the Burbank Hospital, and to the Worcester WIC

program. Approximately 13,500 school-age children, an increase of over 700 pupils, were receiving the benefits of the Fluoride Mouth-Rinse Program in 71 schools.

- *Northeastern Region*—Regional office staff worked actively with the Northeastern Associated Boards of Health, which increased its membership to 165 health workers representing 51 of the 66 communities in the region. Staff were also active in the Massachusetts Environmental Health Association and the Massachusetts Health Officers Association. Through these contacts, local boards of health were kept well informed about issues of concern to the Department and worked cooperatively with the Regional Office. Programs of the Services to Handicapped Children were enlarged by a grant of \$14,500 through the Adaptive Housing Project to provide construction of modifications in the homes of handicapped children in the region. Fifty referrals were received and evaluations were being made to determine funding for individual homes.

- *Southeastern Region*—The Regional Health Office staff provided serums, vaccines, and other materials needed for immunization and disease control programs in many of the 105 communities in the area. Public health guidebooks and law books were made available to local boards of health. Field personnel — such as public health nursing advisors, an epidemiologist, a sanitarian, tuberculosis control program personnel, lead paint program personnel, and staff members from the Division of Family Health Services — carried out the Department's programs and were available for guidance and consultation with area residents.

- *Western Region*—Staff worked closely with other agencies in protecting the health of residents in western Massachusetts. Staff sampled numerous private wells for pesticide contamination under an agreement between the Department of Public Health and the Department of Environmental Quality Engineering. Regional staff also participated regularly in many interagency activities, including the Department of Education's Regional Review Board for Residential Needs (Chapter 766) School Programs, the Office for Children's Inter-Departmental Team, Springfield Area Planning Group, Franklin/Hampshire Area Planning Team, and the Western Massachusetts Regional Directors Group. The Quabbin Health District (Belchertown, Ware and Pelham), working closely with the Regional Office and the Department, completed its fourth and final year under a subsidy of \$6,000 from the Department.

### HOSPITALS

Through the operation of its six public health hospitals, the Department has been able to supplement existing resources on a statewide basis. Although many services once provided only by these hospitals have been absorbed by the private sector, the hospitals continued to provide a broad

range of clinical services to meet the needs of their patients. In fiscal year 1984, programs stressed health promotion, as well as the prevention of the occurrence and progression of disease and disability.

The services and programs of the six public health hospitals are summarized below:

•**Lakeville Hospital**—Lakeville Hospital is a 100-bed, short- and long-term physical rehabilitation facility located in the southeastern region of the state. The hospital's drive to recruit active rehabilitative patients produced an inpatient admission increase of 14 percent over fiscal year 1983. Lakeville Hospital placed 10 chronic, long-term patients either in independent living situations or in an appropriate lower-level facility during fiscal year 1984. The Outpatient Department experienced a 14.3 percent increase in the number of patients seen and a 15.4 percent increase in services rendered over the previous fiscal year.

During the fiscal year, an outdoor recreational complex was constructed on the grounds of the hospital. Twenty-five acres of woodland were developed into picnic pavilions, nature trails, and a fishing pond with pier, all adapted for use by physically handicapped and disabled persons.

During fiscal year 1984, Lakeville Hospital received the highest accreditation status awarded by the Commission on Accreditation of Rehabilitation Facilities (CARF). Of particular interest to the CARF surveyors was the system of program evaluation of pediatric patients, which was developed by the hospital's Chief of Staff. Previously, no such evaluation system existed for ascertaining the special needs of long-term pediatric patients.

In August 1984, Lakeville Hospital completed and released, in chart form, a comprehensive listing of pediatric doses of emergency drugs. Twenty-six of the most commonly used emergency medications are listed in an easy-to-find, easy-to-read format. The chart has been distributed to hospitals throughout the Commonwealth, and has been circulated to other hospitals as a model.

•**Lemuel Shattuck Hospital**—Located in the Jamaica Plain section of Boston, the Lemuel Shattuck Hospital provides medical care to patients for whom community facilities are unavailable or inappropriate. In fiscal year 1984, the hospital began to implement the long-range strategic plan developed in the previous fiscal year, which recommended that the hospital increase its capacity to 325 beds to handle unmet needs in the community.

During the year, the Shattuck continued to provide high-quality health care to both inpatients and outpatients. Average patient census increased by 10 percent, and occupancy was the highest in 10 years. Plans to open the first of three new units were being put into effect. The Outpatient Department, which offers 23 specialty clinics, including dentistry, chronic care, pain and stress, psychiatry, and tuberculosis treatment, provided a total of 25,816 visits to community and state patients — an increase of 7 percent over the previous year.

The Homeless Shelter moved to a new location and has been operating at 100 beds since February. Renovations were underway to expand bathroom and dining facilities and to increase fire safety and security. The shelter has expanded and stabilized its operations, and its mission has been broadened to include organized medical and social services. Hospital staff also played a key role in planning a city-state proposal to



Lakeville Hospital's new recreational trail for the disabled.



provide medical services to the homeless under a grant from the Robert Wood Johnson Foundation and the Pew Memorial Trust.

Fiscal year 1984 was also a year of progress on long-term capital needs. Numerous mechanical and structural renovations have been completed, and improvements to the Bay Cove Mental Health Units were scheduled to begin in the summer of 1984. By the end of the fiscal year, construction began on a new, expanded intensive care unit, and plans were underway for an enlarged correctional medical facility.

•**Massachusetts Hospital School**—Located on 160 acres in Canton, the Massachusetts Hospital School is a unique facility that provides comprehensive medical, educational, and restorative services to physically handicapped but intellectually able children. The Hospital School continued to provide a wide range of clinical services — orthopedic, cardiology, cerebral palsy, Milwaukee brace, myelodysplasia — to both inpatients and outpatients from the surrounding communities. Staff worked to provide a warm, nurturing, and stimulating environment to encourage growth of the handicapped child into a well-adjusted adult. Each young patient, therefore, received highly individualized services.

During fiscal year 1984, the Hospital School provided services to 115 resident children, 18 day students, and over 750 families on an outpatient basis. Individualized plans for each patient and family were developed and implemented in a coordinated and cohesive manner. Specialized recreational therapy was fully incorporated into the program.

A pilot 10-day Respite Care Program, the Caring Circle, was begun in the spring of 1984, providing respite care for 30 physically disabled children and young adults.

Project EYE (Enabling Youth for Employment) was formally inaugurated during the year. The project, which provided training through a supervised work experience, was sponsored jointly by the Hospital School and federal job training programs.

The Massachusetts Hospital School graduated 10 students in June 1984. Of this number, three enrolled in higher education programs. Three of the graduates were living in Independent Living Centers in the state, and four were living at home. Seven were receiving vocational services from the Massachusetts Rehabilitation Commission.

The hospital's Orthopedic Residency Program was strengthened by the addition of Tufts University School of Medicine to the hospital's existing orthopedic affiliations with Carney Hospital and the University of Massachusetts Medical School.

•**Rutland Heights Hospital**—Located in the central Massachusetts community of Rutland, the Rutland Heights Hospital is a 245-bed facility that offers a wide range of regional and statewide specialty programs for adults. The hospital provides comprehensive inpatient and outpatient services, with special emphasis on the needs of the geriatric patient in physical rehabilitation, chronic care, adult day care, or long-term care.

Noted for its expertise in the treatment of alcoholics, the Rutland Heights Hospital operates the state's only 14-day Residential Alcohol Treatment Program for second offense drunk drivers. Because of the Commonwealth's continuing interest in the problem of drunk driving and the visit of over 200 judges and probation officers to the hospital, the number of referrals to the program increased by over 400 percent from



Photo by Gerry Herman.

Members of the Chariots, the Massachusetts Hospital School's hockey team, and Occupational and Physical Therapy staff in a pre-game photo.

928 in fiscal year 1983 to 4,472 in fiscal year 1984. To meet the demand for placement, the program expanded from 88 beds to its maximum capacity of 131 beds.

In June 1984, the hospital opened a four-bed Respite Care Unit, the only one in central Massachusetts. The program was designed to meet the needs of the many families caring for sick and disabled persons at home. Families were able to place such family members in the hospital for a period of up to 14 days.

•**Tewksbury Hospital**—Tewksbury Hospital in northeastern Massachusetts, with a bed capacity of 820, is the largest chronic disease, rehabilitation hospital in the state. It also operates a 225-bed program for homeless men. During fiscal year 1984, approximately 350 men were admitted into the program. All received complete physical examinations, a thorough admission interview, and counseling when deemed necessary.

The Physical Medicine Rehabilitation Committee continued to provide assessments and services to patients. All newly admitted patients were assessed by the committee and written recommendations made. Of a total of 188 patients who received assessments, 99 received the services of physical therapy, occupational therapy, recreational therapy, or speech therapy.

The hospital's School of Practical Nursing graduated 39 students in the Class of 1983. The hospital continued to cooperate with such programs as the clinical pastoral education program, independent living program, head start, and the day care center, which provides a service for working mothers from low-income families.

•**Western Massachusetts Hospital**—Located on 206 acres of land in Westfield in Hampshire County, the Western Massachusetts Hospital provides inpatient and outpatient services to both adults and children, offers day care services, and

operates a School for Practical Nurses.

During fiscal year 1984, the hospital provided hospice/palliative care for the terminally ill, chronic care for adults and children, adult and pediatric respite care, specialized care of comatose patients in the expanded Coma Unit, adult day care, and summer day care programs for handicapped children.

Major highlights of the fiscal year follow:

- Outpatient visits reached 10,755.
- Over \$1,063,000 of free care was provided.
- The Pediatric Summer Respite Care Program was filled to capacity; the Adult Respite Program experienced a significant increase for the second year.
- The hospital announced its decision to accept patients with AIDS for admission to the hospice/palliative unit.
- The School for Practical Nurses graduated 30 students in July 1983.
- The Legislature appropriated over \$3 million in capital improvements to hospital facilities.

During fiscal year 1984, the Department's six Public Health Hospitals admitted 4,013 patients, an increase of 5.5 percent over the previous year. The average length of stay varied from 24.7 days at the main section of the Lemuel Shattuck to 1,489.2 days at Tewksbury (Table 6).

The hospitals continued to expand training of physicians and paramedical personnel as part of the Department's total public health effort. Lemuel Shattuck, Tewksbury, and Western Massachusetts Hospitals graduated 105 practical nurses from their accredited schools of practical nursing, the largest number in several years. Many of the nurses continued to work at the hospitals.

Table 6.  
Public Health Hospitals  
Annual Census Summary - July 1, 1983 - June 30, 1984.

| Hospitals             | Admissions   | Discharges   | Days           | Stay*    | Census   | Visits        |
|-----------------------|--------------|--------------|----------------|----------|----------|---------------|
| Lakeville             | 379          | 389          | 28,886         | 162.2    | 79.7     | 11,424        |
| Lemuel Shattuck       |              |              |                |          |          |               |
| Main                  | 1,645        | 1,573        | 37,375         | 24.7     | 102.0    | 21,036        |
| Medical Geriatric     | 52           | 53           | 16,783         | 583.6    | 45.8     | 39            |
| Bay Cove              | 497          | 496          | 24,301         | 33.0     | 60.4     | 560           |
| Mass. Hospital School | 129          | 133          | 27,845         | 221.9    | 116.0**  | 1,664         |
| Rutland Heights       | 379          | 370          | 36,303         | 90.5     | 99.0     | —             |
| Tewksbury             |              |              |                |          |          |               |
| Main                  | 277          | 98           | 260,616        | 1,489.2  | 711.8    | —             |
| Homeless Men          | 367          | 384          | 63,187         | 141.2    | 172.3    | —             |
| Western Mass.         | 288          | 144          | 24,535         | 125.8    | 80.0     | 9,546         |
| <b>Total</b>          | <b>4,013</b> | <b>3,640</b> | <b>519,831</b> | <b>—</b> | <b>—</b> | <b>44,269</b> |

\*Stay represents number of days.

\*\*Average daily census at the Massachusetts Hospital School has been adjusted to reflect enrollment days.



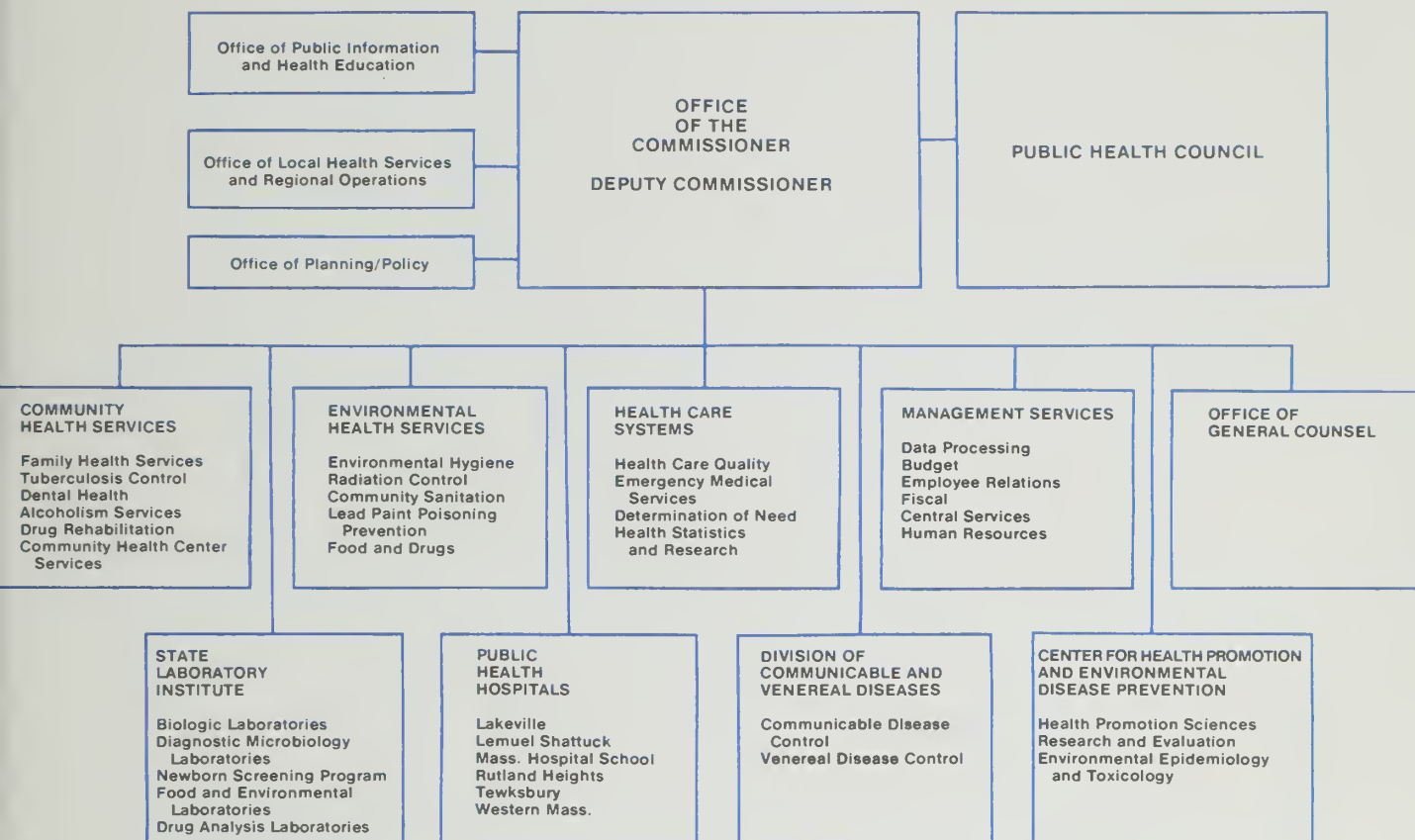
**EXPENDITURE REPORT**  
**DEPARTMENT OF PUBLIC HEALTH**  
**JULY 1, 1983 - JUNE 30, 1984**

|   | STATE                | FEDERAL             | TOTAL                |
|---|----------------------|---------------------|----------------------|
| <b>COMMISSIONER'S OFFICE</b>                | 880,991              | —                   | 880,991              |
| <b>MANAGEMENT SERVICES</b>                  | 2,807,949            | —                   | 2,807,949            |
| <b>LEGAL OFFICE</b>                         | 181,007              | —                   | 181,007              |
| <b>Sub-Total</b>                            | <b>3,869,947</b>     | <b>—</b>            | <b>3,869,947</b>     |
| <b>COMMUNICABLE &amp; VENEREAL DISEASES</b> | 3,900,368            | 308,245             | 4,208,613            |
| <b>Sub-Total</b>                            | <b>3,900,368</b>     | <b>308,245</b>      | <b>4,208,613</b>     |
| <b>COMMUNITY HEALTH SERVICES</b>            |                      |                     |                      |
| Family Health Services                      | 9,729,882            | 21,562,028          | 31,291,910           |
| Preventive Medicine                         | 739,543              | 693,719             | 1,433,262            |
| Tuberculosis Control                        | 2,436,973            | 95,242              | 2,532,215            |
| Local Health                                | 561,350              | 68,354              | 629,704              |
| Dental Health                               | 2,209,553            | 241,027             | 2,450,580            |
| Community Health Centers                    | 1,091,943            | —                   | 1,091,943            |
| Alcoholism                                  | 19,751,017           | 4,042,825           | 23,793,842           |
| Drug Rehabilitation                         | 4,609,532            | 3,470,387           | 8,079,919            |
| <b>Sub-Total</b>                            | <b>41,129,793</b>    | <b>30,173,582</b>   | <b>71,303,375</b>    |
| <b>ENVIRONMENTAL HEALTH</b>                 |                      |                     |                      |
| Lead Poisoning Prevention                   | 805,681              | 719,926             | 1,525,607            |
| Radiation Control                           | 269,532              | —                   | 269,532              |
| Food and Drugs                              | 1,246,585            | —                   | 1,246,585            |
| Environmental Health Assessment             | 151,612              | —                   | 151,612              |
| Community Sanitation                        | 16,846               | 154,050             | 170,846              |
| <b>Sub-Total</b>                            | <b>2,490,256</b>     | <b>873,976</b>      | <b>3,364,232</b>     |
| <b>HEALTH PLANNING &amp; REGULATION</b>     |                      |                     |                      |
| Health Statistics & Research                | 1,199,187            | 54,361              | 1,253,548            |
| Determination of Need                       | 476,857              | —                   | 476,857              |
| Emergency Medical Services                  | 244,184              | 627,650             | 871,834              |
| Health Care Quality                         | 3,508,643            | 438,849             | 3,947,492            |
| <b>Sub-Total</b>                            | <b>5,428,871</b>     | <b>1,120,860</b>    | <b>6,549,731</b>     |
| <b>STATE LABORATORIES</b>                   | 5,532,689            | 186,774             | 5,719,463            |
| <b>Sub-Total</b>                            | <b>62,351,924</b>    | <b>32,663,437</b>   | <b>95,015,361</b>    |
| <b>HOSPITALS</b>                            |                      |                     |                      |
| Lakeville Hospital                          | 7,330,349            | —                   | 7,330,349            |
| Lemuel Shattuck Hospital                    | 18,181,026           | —                   | 18,181,026           |
| Mass. Hospital School                       | 6,785,610            | —                   | 6,785,610            |
| Rutland Heights Hospital                    | 6,827,844            | —                   | 6,827,844            |
| Tewksbury Hospital                          | 19,465,916           | —                   | 19,465,916           |
| Western Mass. Hospital                      | 5,576,709            | —                   | 5,576,709            |
| <b>Sub-Total</b>                            | <b>64,167,454</b>    | <b>—</b>            | <b>64,167,454</b>    |
| <b>Total</b>                                | <b>\$126,519,377</b> | <b>\$32,663,437</b> | <b>\$159,182,814</b> |

# EXECUTIVE OFFICE OF HUMAN SERVICES

## MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

June 30, 1984







The Commonwealth of Massachusetts  
Michael S. Dukakis, Governor

Executive Office of Human Services  
Philip W. Johnston, Secretary

Department of Public Health  
Bailus Walker, Jr., Commissioner

Publication of this Document Approved by  
Daniel D. Carter, State Purchasing Agent

4m-1 85-8021

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*Massachusetts Department of Public Health*

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# *Fostering A Healthy Society*

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## MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

Bailus Walker, Jr., Ph.D., M.P.H.  
*Commissioner of Public Health*  
*Chairman, Public Health Council*

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### 1985 ANNUAL REPORT

Pearl K. Russo, *Editor*  
Roger M. Davenport and Dennis Sterzin, *Graphic Design*  
Ken Schulman, *Director, Office of Public Information*  
*and Health Education*

Photo credits: Marjorie Crowel, Harold Crowley, Envision, Inc., John McGonagle, Bill O'Donnell, Nancy Palmieri, Peter Shur.

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June 30, 1985

# *Fostering A Healthy Society*

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## **Massachusetts Department of Public Health 1985 Annual Report**

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## From the Office of the Commissioner

With the issuing of this newly formatted Department of Public Health Annual Report for 1985, we wish to call particular attention to the breadth and depth of services provided by our many divisions, offices, and hospitals, services that reflect the Department's basic legislative mandate—"To maintain, protect and improve the health and well-being of the people."

Although first formulated in 1869, this mandate remains unchanged, underscoring the Department's approach to solving the problems that have arisen in this, the last decade and a half of the 20th Century. Reiterating the belief that sound health is a right of all people and that the delivery of health care operates within the confines of the social and economic factors that affect their lives, the Department established a list of public health priorities and objectives to improve the health and safety of Massachusetts residents, as well as to control the spiraling cost of health care in the state. During the fiscal year that ended June 30, 1985, the Department made substantial progress in carrying out its objectives.

This progress is exemplified by the many accomplishments in five general categories:

- **Fostering a Healthy Society**

During the fiscal year, the Department improved on a number of activities to meet the needs of Massachusetts residents. Services to enhance the health of the family, to help prepare adolescents for a healthy adulthood, to prevent addictive diseases, to prevent dental disease, and to support public health activities in local communities, were provided comprehensively and to ensure access to persons in need.

- **Protecting the Individual**

Integral to the prevention of disease is the two-pronged approach to changing people's lifestyles and reducing the risk of physical, chemical, and biological agents in the environment. During the last fiscal year, the Department's Center for Health Promotion and Environmental Disease Prevention and the Bureau of Environmental Health Services were successful in increasing comprehensive high blood pressure detection and follow-up, enhancing public information efforts on the serious health effects of lead poisoning, and

beginning to meet its responsibilities under the provisions of the Massachusetts Right-to-Know Law.

- **Enhancing Patient Services and Health Care Cost Containment**

In fiscal year 1985, the Division of Health Care Quality, the Determination of Need Program, and the Department's seven public health hospitals made significant strides in carrying out activities to ensure high quality, cost controlled services, such as, the issuing of licenses to the first two birthing centers in the state, and the establishment of a toll-free patient abuse reporting hotline and of an organ transplantation policy.

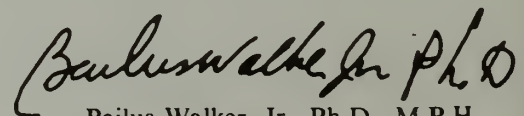
- **Controlling Communicable Diseases**

To strengthen the Department's programs in the control of communicable diseases, the Divisions of Communicable Diseases and Tuberculosis Control and the State Laboratory Institute were consolidated in the last fiscal year into a new Center for Laboratories and Communicable Disease Control. Among its successful efforts were the coordination of needed counseling and testing services for persons with Acquired Immune Deficiency Syndrome (AIDS), and the assurance of adequate immunization services.

- **Providing Support Services**

The support and coordination of the Department's services are essential to the effective operation of our many programs. To this end, the Department developed specific activities that helped to produce new regulations, analyze the relationship of occupation to cancer and birth outcomes, and implement four, new statewide public education campaigns.

These activities are reflective in small part of the Department's overall programs and services in fiscal year 1985 to reduce the risks of disease and disability in the Commonwealth. None of this could have happened without the Governor's support of public health activities. In addition, the Massachusetts Legislature and the Executive Office of Human Services have been instrumental in furthering our efforts. Our accomplishments also represent the work of many agencies, organizations, groups, and individuals who have helped us to make health care accessible to the people of Massachusetts. To all of you, our sincere thanks.

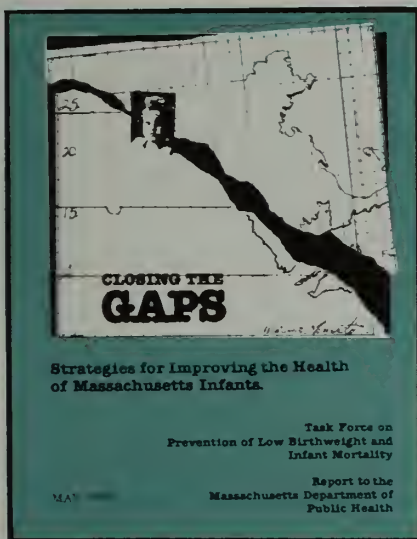


Bailus Walker, Jr., Ph.D., M.P.H.  
Commissioner

# Fostering a Healthy Society

As we rapidly draw near the 21st Century, the complexities of life demand a comprehensive approach to the provision of health care throughout the Commonwealth. Such an approach requires an integrated effort between all the divisions of the Department, involving combined resources, programs, and personnel.

## Highlights



A Task Force on the Prevention of Low Birthweight and Infant Mortality issued a sobering report in May. By the end of the fiscal year, Department staff were beginning to implement the task force's recommendations for "closing the gaps" found in the study.

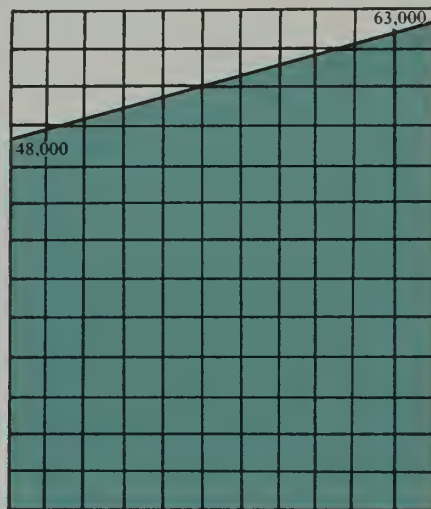
### PREGNANCY & ALCOHOL DON'T MIX!

If you are pregnant or are planning to become pregnant, see your physician or visit a prenatal clinic. Also, stop by your nearest Massachusetts, CVS/Pharmacy for a free pamphlet presenting scientific facts about drinking alcoholic beverages during your pregnancy and the possible dangers to your unborn child.

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**Available At Our Prescription Counter**

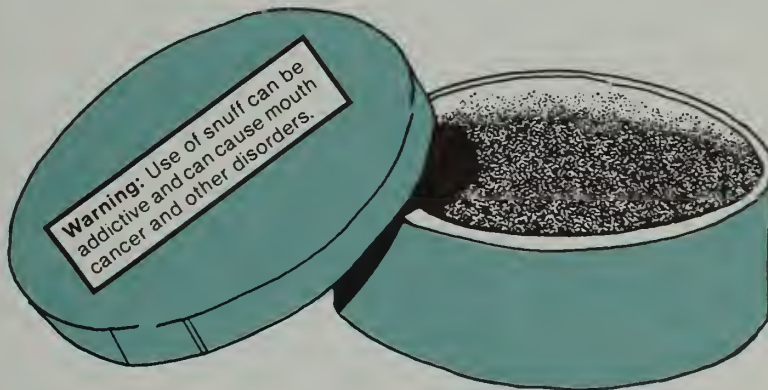
The Division of Alcoholism collaborated with local CVS drug stores in a statewide public awareness campaign on Fetal Alcohol Syndrome, and established two new bilingual, bicultural halfway houses.



Participation in the Women, Infants and Children (WIC) Program rose from 48,000 to 63,000 women, infants, and children.



The Division of Drug Rehabilitation completed a statewide survey on drug and alcohol use among junior and senior high school students in Massachusetts. The results were used by the Governor's Alliance Against Drugs in its efforts.



The Department promulgated a regulation - the first in the nation - requiring a health hazard warning label on containers of snuff sold in the Commonwealth as of February 1, 1986.



## Services to Enhance the Health of the Family

An important aspect of the Department's efforts to foster a healthy society in the past year centered on improved services to mothers and children. Through the **Division of Family Health Services**, the Department carried out diverse programs to reduce infant and maternal mortality, promote maternal and child health, evaluate and treat handicapped children, and serve women who are victims of abuse and violence.

- **The Maternal and Infant Care (MIC) Prenatal Projects** reached 4,000 high-risk, low-income pregnant women in 19 high-risk areas of the state with medical care, social services, nutrition counseling, health education, family planning, and other preventive services

- **Under the Federal Special Supplemental Food Program for Women, Infants and Children (WIC)**, the number of women, infants, and children under the age of five who received supplemental nutritious food, nutrition counseling and health care referrals rose from 48,000 to 63,000. In addition, WIC encouraged the development of a **Breastfeeding Promotion Project**, to increase both the number of WIC participants who choose to breastfeed and the duration of breastfeeding. The special **Southeast Asian Refugee Project** served over 2,500 Southeast Asians throughout the state. To aid this group more effectively, WIC trained 12 Southeast Asians to work in 14 local WIC programs, not only as interpreters but also as nutrition assistants.

- **The Children and Youth Projects**, an important element of the Division's efforts to help children become healthy, productive adults, offered primary care to over 45,000 preschool and school age children up to age 21 in low income, high-need areas of the state. Over 200,000 school children were screened by the Division for postural defects, and more than 900 were certified for psychotropic drug use.

- **The High-Risk Infant Identification Program** became fully operational in fiscal year 1985 and identified over 4,000 infants born with low birthweight, congenital anomalies, or other high-risk conditions. Nearly 12,000 high-risk infants and members of their families received community-based support, education, counseling, and referral services.

- **The Sudden Infant Death Syndrome (SIDS)**

**Program** provided 24-hour, on-call, medical and nursing counseling services statewide to approximately 100 families who had lost a child to this mysterious syndrome. The program also paid for autopsy of the infant, and developed educational and training programs for health professionals.

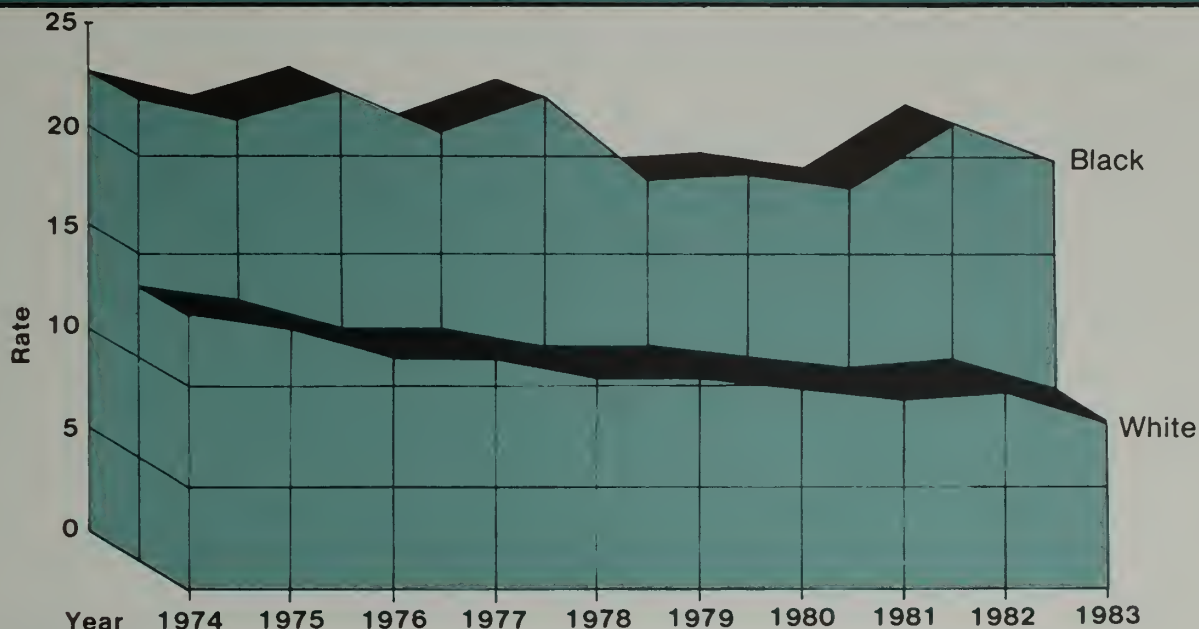
- **All Neonatal Intensive Care Units** in the state received support from the Division of Family Health Services to ensure discharge planning and follow-up with community hospitals and service providers. Over 1,500 infants and their families received community-based support services, primarily through home visits.

- The report of a 19-member **Task Force on the Prevention of Low Birthweight and Infant Mortality**, appointed by Commissioner Walker, revealed gaps not only in rates of low birthweight, newborn and infant deaths by race, ethnicity, and low income level, but also in the percentages of women receiving adequate prenatal and postnatal comprehensive medical care (Fig. 1). By the end of the fiscal year, the task force's recommendations were being readied for implementation:

- All current programs described above to receive additional funds to reach greater numbers of women and children throughout the state.
- The promotion of public/private coalitions at the local and regional levels to discuss the needs and problems of communities at high risk of low birthweight, infant mortality, teen births, and inadequate or lack of prenatal care.
- A media and outreach campaign to educate consumers and providers on the factors promoting healthy birth outcomes, the importance of prenatal care, and ways to obtain care and payment for it.
- A committee of representatives from professional organizations to develop comprehensive prenatal care standards for statewide implementation.
- Healthy Start, subcontracted from the Department of Public Welfare, established as a payer of last resort program for pregnant women who are ineligible for Medicaid, lack health insurance coverage for maternity care, and who have incomes below 185 percent of the federal poverty level. The program will cover prenatal, delivery, and postpartum care.



**Figure 1. Infant Mortality Rates by Race, Massachusetts, 1974 - 1983.**



IMR=Deaths Under 1 Year/1000 Live Births.

Data Source: Division of Health Statistics and Research, MDPH.

- **The Statewide Childhood Injury Prevention Program (SCIPP)** received a \$750,000 three-year grant from the federal Maternal and Child Health Special Projects of Regional and National Significance to reduce injuries among children and adolescents in the Commonwealth. During fiscal year 1985, SCIPP began to transform its project from a research and demonstration activity into an established statewide program for the reduction of childhood injuries. Two injury prevention modules, on home injury prevention and preschool health, were pilot-tested, and needs assessments were initiated for the primary care and elementary school modules. During the year, SCIPP also worked with the **Massachusetts Poison Control System** and the **Massachusetts Passenger Safety Program** on public education and information efforts.

- **The Pregnancy/Environmental Hotline**, a statewide, toll-free number, gave information to over 1,000 callers on the effects of hazardous substances on the health of pregnant women and their unborn children.

- **The Services to Handicapped Children's (SHC) Section** of the Division of Family Health Services worked to maximize the healthy growth and development of disabled children, and to keep them at home or in the community whenever possible. In all, nearly 10,000 children from birth through age 21 were served through the Division's three units: the Early Childhood Development Services Unit, which supported 43 early intervention providers throughout the state; the Community Services Unit, which served over 500 children in home health care, pediatric nursing homes, and camp programs; and the Clinical Services Unit, a statewide system of specialized clinics for children with handicapping conditions and chronic diseases.

- In the last fiscal year, the **Women's Health Unit** of the Division of Family Health Services expanded to provide numerous and varied services and educational programs designed to reduce morbidity and mortality among women, and to strengthen an understanding of the special health concerns of women within their social, occupational, and reproductive roles. Among these were:

- **The Women's Health and Learning Center**, a comprehensive program for incarcerated women, which increased its services to include 800 women inmates in Massachusetts.





- **An informational and educational program on the health effects of diethylstilbestrol (DES).** More than 100 offspring of women who had been exposed to DES during pregnancy received a diagnostic evaluation at Department-supported medical centers across the state.
- **An Office Technology Education Project,** which developed educational programs for office workers on hazards in the workplace.
- **A Resource Center for the Prevention of Family Violence and Sexual Abuse,** established to consolidate educational materials and collect data on the incidence and ramifications of family violence and sexual abuse in the state.
- **Rape Prevention and Victim Services,** which provided crisis counseling, advocacy, and follow-up for 3,000 victims of rape or sexual abuse in 13 programs across the state.

### Services to Help Prepare Adolescents for a Healthy Adulthood

To help prepare adolescents for a healthy, productive adulthood, the Department offers multidisciplinary services across the state. Programs aim to educate adolescents about good health practices, prevent teenage pregnancies, provide better prenatal and follow-up care to teenagers who become pregnant, and prevent alcohol and drug abuse (Table 1).

- **Pregnant and Parenting Adolescent Programs,** which are contracted by the Division of Family Health Services, maintained health care, education, and counseling services for approximately 4,000 teenagers.

- **Six comprehensive health programs** made available medical services, individual and group counseling, education and referral to more than 15,000 adolescents, parents, and community leaders.

**Table 1.**  
**Services Delivered by**  
**Adolescent Health Programs, 1985.**

| Service                   | CAHP*<br>(6 programs) | PPP**<br>(9 programs) | Total  |
|---------------------------|-----------------------|-----------------------|--------|
| 1. Clinic visits†         | 28,556                | 10,908                | 39,464 |
| 2. Medical examinations   | 12,485                | 12,439                | 24,924 |
| 3. Counseling sessions    | 7,767                 | 11,392                | 19,159 |
| 4. Pregnancy tests        | 2,276                 | 1,871                 | 4,147  |
| 5. Family planning visits | 8,499                 | 5,146                 | 13,645 |
| 6. Home visits            | —                     | 11,253                | 11,253 |

\*CAHP = Comprehensive Adolescent Health Programs.

\*\*PPP = Pregnant and Parenting Programs.

†"Clinic visits" represent single, unduplicated visits.

Source: Division of Family Health Services.



Counseling session, adolescent health programs.

### Services to Prevent Addictive Diseases

The Department supports services throughout the state that seek to prevent alcohol and drug abuse and treat drug dependencies when they occur. In fiscal year 1985, the Divisions of Alcoholism and Drug Rehabilitation strengthened existing programs and developed joint projects to deal more effectively with the growing problem of drug abuse and addiction.

- **The Division of Alcoholism** administered a purchase of service system that totaled approximately \$28 million in fiscal year 1985, and developed new and alternative programs during the year. Included were:

- **A public awareness program on Fetal Alcohol Syndrome.** The Division issued an informational brochure, and launched a campaign with Consumer Value Stores (CVS) to distribute the brochure through the 111 CVS pharmacies across the state and make available to the public audio cassette tapes explaining the effects of alcohol consumption during pregnancy.
- **In collaboration with the Department of Public Welfare, a 30-bed Public Inebriate Program Shelter** for men and women in Lawrence.
- **A Short-Term Alcohol and Referral Project** in Boston to help meet the needs of chronic recidivists.
- **Two new bilingual, bicultural halfway houses,** one in Springfield and one in Boston, to meet the needs of the Hispanic community in the state.

- **An innovative Driver Education Program** to serve drivers sentenced for drunk driving by the Quincy City Court.
- **The new 14-day Driving Under the Influence (DUI) Programs**, at the Department's Lakeville and Tewksbury Hospitals and at the Middlesex County Hospital. The addition of 180 beds significantly reduced waiting time for admission.
- **Tertiary Prevention Programs** that included 51 halfway houses, 20 detoxification centers, 46 outpatient programs, and 3 public inebriate programs.

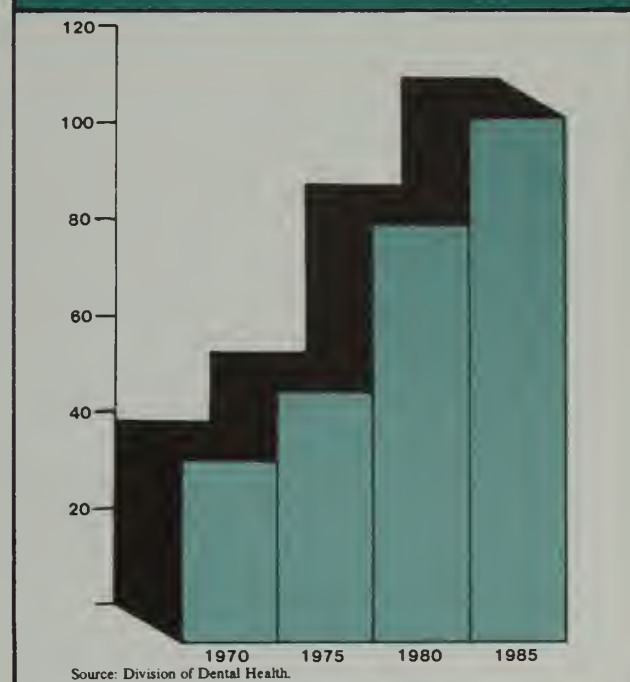
• **The Division of Drug Rehabilitation** continued its work to alleviate drug use and abuse in Massachusetts through a network of prevention and treatment services. In fiscal year 1985, the Division maintained five categories of basic treatment that served 10,917 clients. These included: residential detoxification services, outpatient methadone maintenance, residential drug-free treatment services, and outpatient drug-free counseling services. In addition, the Division's 62 prevention programs designed to help persons at risk offered a wide range of services—prevention education, community prevention programs, and intervention programs.

During the fiscal year, the Division developed several new initiatives:

- **Vocational education, and substance abuse treatment for prison populations**, serving 688 clients.
- **Five new juvenile court diversion programs** to aid young people through short-term counseling sessions, thus preventing habitual drug use.
- **A statewide survey on drug and alcohol use among junior and senior high school students.** The study indicated that drug and alcohol use was widespread in the ninth through twelfth grades. The report aided the Governor's Alliance Against Drugs to mobilize and coordinate the efforts of public and private agencies, and parent and student groups to develop strategies for confronting and reducing drug and alcohol use and abuse by school-aged children.

• The Divisions of Alcoholism and Drug Rehabilitation also cooperated to establish six **residential treatment programs** for youths 14 to 19 years of age who become seriously involved with drugs, and **eight Residential Primary Prevention Centers** across the Commonwealth. Working in collaboration with the Massachusetts Parole Board, the two Divisions initiated a pilot project for inmates being paroled from southeastern Massachusetts correctional institutions. The project seeks to identify alcohol and drug-abusing inmates and refer paroled persons to appropriate alcoholism and drug agencies.

Figure 2. Number of Massachusetts Communities with Fluoridated Water Supplies, 1970 - 1985.



## Services to Prevent Dental Disease

To prevent dental disease in the Commonwealth, the Department, through its Division of Dental Health, supports fluoridation of public water supplies, carries out public education on good dental health practices, and provides dental care for wards of the state.

• **Prevention of Oral Disease**—As a result of state and local public education programs, 2.4 million people have been receiving fluoridated water since 1979. By the end of fiscal year 1985, 55 percent of the state's public water supplies were fluoridated, as compared to only 8 percent in 1969 (Fig. 2).

- **Enrollment in the school-based Fluoride Mouthrinse Program** increased by 30 percent to bring the total number of children to 78,000 and the number of participating communities to 150. It is estimated that the program prevents 50,000 teeth from decaying and saves \$900,000 in dental bills.





Participant in sealant program.



Pupil receiving dental sealants.

- An additional \$139,000 was expended during the fiscal year to promote the **use of dental sealants** for prevention of tooth decay among children. Approximately 6,500 children from 23 sites, including local health centers and schools, received the benefits of sealants.
- The Division's **report on the health effects of smokeless tobacco** documented cases of oral cancer, tooth loss, and abrasion. After public hearings in February, the Department promulgated a regulation—first in the nation—requiring a health hazard warning label on containers of snuff sold in the Commonwealth (effective February 1, 1986). The Department also proposed legislation that would place smokeless tobacco products under the state's tobacco tax, and supported raising the legal age for distribution from 16 to 18.

• **Dental Care**—To meet the needs of publicly supported groups outside the main stream of health services, the Division maintained support of seven clinics located at state schools, regional clinics located at sites operated by the state Department of Youth Services, and a clinic for the homeless at the Shattuck Hospital.

### Services to Support Public Health Activities in Local Communities

Recognizing the importance of supporting regional and local public health efforts and activities, the Department strengthened its ties with community providers, local boards of health, and other agencies and organizations. To this end, new and ongoing initiatives included:

- **The Office of Emergency Medical Services (OEMS)**, which is responsible for ensuring prompt and effective delivery of emergency medical care, continued its efforts to prevent cardiac disease, traumatic injury, and other medical emergencies. Programs to upgrade resources and to broaden local and state networks of emergency medical services functioned throughout the year. These included:
  - **Administrative coordination and approval of all basic emergency medical technician (EMT) courses** in the state. In fiscal year 1985, there were approximately 8,000 EMTs in the Commonwealth.
  - **Advanced Life Support Services** providing sophisticated treatment to victims at the scene of



Youngster receiving hearing test from Western Massachusetts Hospital audiologist.

accident or illness to 27 percent of the state's population.

- **A comprehensive program on pediatric emergencies**, which trained more than 140 emergency departments, and a Critical Care Emergency Departments' Nurse Education Program, which trained 115 nurses, bringing the total number of such nurses to more than 700.

• As part of the Department's overall effort to make medical care available and accessible to all sections of the population, the Department again supported 37 **community health centers**. These centers, which in the past fiscal year had more than 165,000 visits statewide, offered dental, obstetrical, gynecological, pediatric, adolescent, primary care and social services.

• **The Office of Local Health Services and Regional Operations**, which was established to help strengthen ties with regional and local health providers, became fully operational in fiscal year 1985. Through its four Regional Health Offices, a variety of programs were developed or coordinated for local boards of health and other health agencies. Major activities included training, information, advocacy, policy development and assessment, consultation and communications. In addition, the four

offices served as the regional base for a number of the Department's centrally administered programs, such as, services to handicapped children, lead poisoning prevention, dental health, and enforcement of food and drug laws.

Among the highlights of the activities of the Regional Health Offices during the fiscal year were:

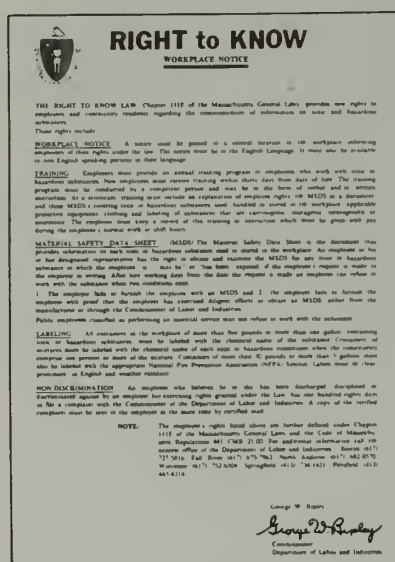
- Participation in the formation of a Worcester Housing Court and development of a course in Community Health Nursing at Worcester State College (**Central Regional Health Office**).
- Review of the health service needs in Lawrence and participation in housing enforcement activities in Lowell (**Northeastern Regional Health Office**).
- Participation in the Southeastern Massachusetts Cervical Cancer Workgroup, to provide information and health education on cervical cancer, and serving on the Mayor of Brockton's Task Force on Health and Human Services (**Southeastern Regional Health Office**).
- Assisting in the formation of the Eastern Franklin County Health District and participation in several interagency efforts to meet local human services needs (**Western Regional Health Office**).



# Protecting the Individual

Protecting the health of the approximately 6,000,000 citizens of the Commonwealth remains the major focus of the Department of Public Health's activities. How this can best be achieved has received serious consideration from all divisions, units, and programs. Changing people's lifestyles to reduce the incidence of heart disease, cancer, and stroke is but one aspect of a multifaceted approach to the problem, and basic to all prevention efforts. The Department's responses to the concerns of the people include efforts to reduce the risk of physical, chemical, and biological agents in the environment, and are carried out by the Center for Health Promotion and Environmental Disease Prevention, and the Bureau of Environmental Health Services.

## Highlights



The Department began to meet its responsibilities under the provisions of the Massachusetts Right-to-Know Law.



Twelve community programs provided comprehensive high blood pressure detection and follow-up care to approximately 13,500 residents of the Commonwealth, an increase of 35 percent over the previous year.



The Department issued the state's first regulations that permit physician assistants and nurse practitioners to prescribe medicines for chronically ill patients.



Lead Poisoning Prevention Week, which was held in June by proclamation of Governor Dukakis, began a year-long campaign to inform the public of the serious health effects of lead poisoning.

## Services to Promote Health and Prevent Disease

In fiscal year 1985, the Center for Health Promotion and Environmental Disease Prevention began implementation of a comprehensive program to reduce the lifestyle risk factors for heart disease, cancer, and stroke. At the same time, the Center responded to community concerns about elevated cancer rates and possible links between these rates and environmental toxic exposures. These activities were carried out through two Divisions: Health Promotion Sciences and Environmental Epidemiology and Toxicology.

- **The Division of Health Promotion Sciences** provided high blood pressure screening programs, coordinated physical fitness programs, sponsored smoking prevention activities, and operated a nutritional hotline and information service:

- **Twelve community programs provided comprehensive high blood pressure detection and follow-up care** to approximately 13,500 residents of the Commonwealth, an increase of 35 percent over the previous year. The screening programs also supplied participants with educational materials on the other major lifestyle risk factors for heart disease, cancer, and stroke — smoking, physical inactivity, and poor nutritional habits. The Hypertension Training and Education Center,

funded by the Center, offered professional education to approximately 600 health care professionals through five regional conferences held in May.

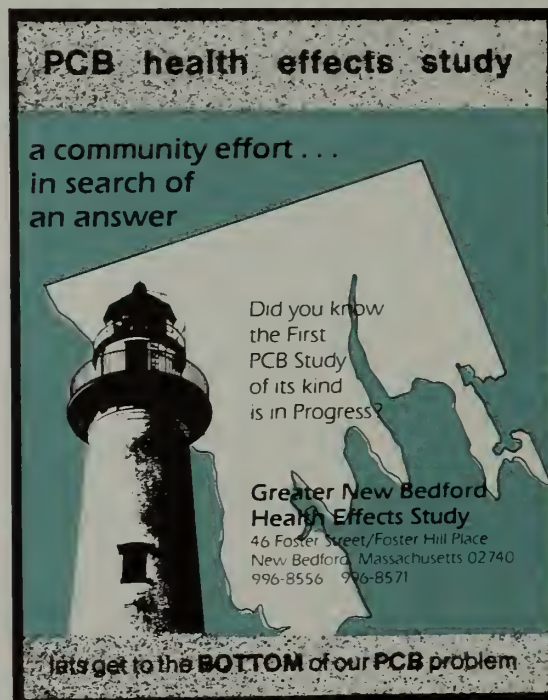
- **The LifeStyle Program**, a worksite health promotion service, expanded to include state employees in 20 agencies in downtown Boston. During the year, the LifeStyle staff administered 181 health assessments to establish a baseline for future activities. Other programs included educational presentations, counseling, and exercise classes.
- **The Resource Center for Firefighter Fitness** at Bridgewater and Amherst, which served firefighters and other public safety employees from 15 communities, again received support from the Center. The programs demonstrated that incorporating a fitness program into one's lifestyle can increase the efficiency of cardiovascular fitness.
- In cooperation with the Governor's Committee on Physical Fitness and Sports, the Center sponsored the first annual "Fitness Day on the Hill." Legislators and their aides who participated in the free fitness testing received a thorough health screening, including cardiovascular risk factor analysis and aerobic fitness, body composition, flexibility and muscular endurance tests. Participants received a summary and interpretation of their test results, as well as recommendations for improved fitness.



Governor Dukakis participating in Fitness Day on the Hill.



- Responding to the problem of increasing incidence of lung cancer in Massachusetts, the Department intensified its **educational activities on the dangers of smoking**. During January 1985, which had been designated "Nonsmokers Awareness Month" by the Governor, the Department carried on a joint campaign with the Massachusetts Hospital Association to educate nonsmokers about the health effects of exposure to tobacco smoke and how to protect themselves from second-hand smoke. The Department distributed 50,000 copies of a brochure entitled, "Are You *Really* a Nonsmoker?", which provided information on the effects of tobacco smoke on nonsmokers and practical advice on what they can do to protect themselves from second-hand smoke.
- The Center collaborated with the American Lung Association of Massachusetts in the publication of a new edition of the **Nonsmokers' Guide to Massachusetts**. The 1985 Guide included an updated listing of health facilities, insurance companies, and restaurants that have voluntarily instituted policies to promote the health and well-being of nonsmokers.
- Four state colleges, with resources provided by the Department, offered **graduate level courses** to approximately 100 teachers and allied school personnel **on the prevention of smoking and drug abuse**. The Department of Education's Commonwealth Inservice Institute received support to establish 11 inservice training programs for approximately 220 teachers and allied school personnel. In addition, the Department of Public Health supported the training of 25 health educators in Boston's middle schools.
- Many epidemiologic and intervention studies in this country and abroad have stressed the relationship of diet to such diseases as coronary heart disease and cancer. Responding to a heightened consumer awareness and concern, the **Massachusetts Nutrition Resource Center (MNRC)** continued to offer consumers and health professionals expert nutrition advice and information through a statewide, toll-free, nutrition hotline and mail request service. MNRC staff answered over 10,000 requests for information on sodium in the diet, fiber, calcium needs of adults, fat and cholesterol. The Massachusetts Nutrition Resource Center is a joint program of the Department and the Frances Stern Nutrition Center of Tufts University.
- **The Division of Environmental Epidemiology and Toxicology** provided services designed to identify the determinants of disease in order to prevent or reduce the future incidence of such diseases as leukemia, cancer of the kidney, pancreatic cancer and birth defects. Services included a number of studies to help identify communities for which disease prevention resources can be targeted, as well as technical assistance to agencies and groups:
  - The Division began a study of elevated rates for **kidney cancer in the Merrimack Valley** to determine whether the many years of manufacturing in the area may have increased the population's risk of kidney cancer. Other investigations carried out in 20 communities in the state found no elevation of cancer rates.
  - **The Greater New Bedford Polychlorinated Biphenyls (PCB) study** began full field operations in May 1985 to determine the exposure of 1,400 adults in the Greater New Bedford area to PCBs and possible health effects.
  - Collaborating with the Boston Department of Health and Hospitals, staff conducted **an analysis of the causes of death in 15 neighborhoods in Boston** from 1979-1982, concentrating on the three leading causes of death. Planning for risk factor reduction programs in neighborhoods identified as high risk was underway by the end of the fiscal year.
  - Responding to the growing number of citizen inquiries about pollutants in the environment and food chain, the Division carried out **assessments of the health risks to the public from exposure to toxic substances** in the air and in water, food, and consumer products. Staff provided technical assistance to state agencies and committees established to assess the effects of environmental pollutants on the health of the people. Division staff also provided **guidance on the health risks of pesticides** being considered for registration by the Massachusetts Pesticide Board Subcommittee. After intensive review of the literature by unit staff, the subcommittee banned the use of chlordane, a pesticide used for termite control, and amitrole, a herbicide.
  - In response to a **continuing elevation of childhood leukemia cases in Woburn**, the Center convened a two-day meeting of scientific experts from around the country to review all existing health and environmental data from Woburn, and the possible relation of the cases to the dumping of toxic waste. By the end of the fiscal year, staff were preparing recommendations for follow-up activities.





Food and Drug Inspector checking freshness of milk.

## Services to Ensure a Healthy Environment

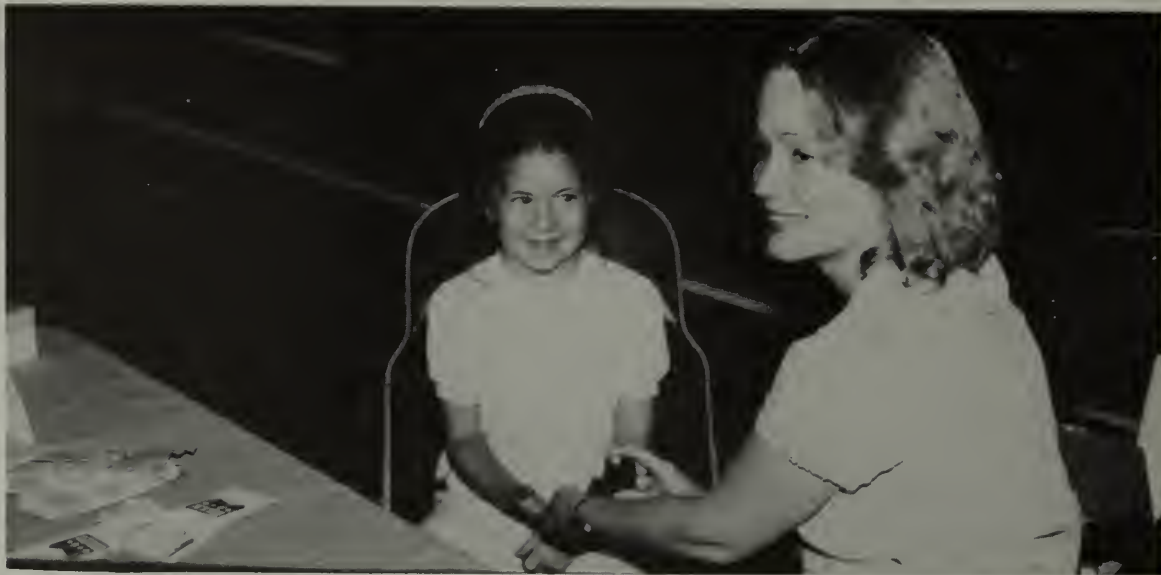
In fiscal year 1985, the **Bureau of Environmental Health Services**, which includes four divisions, continued its work of identifying and evaluating environmental hazards to human health and developing corrective measures to reduce such risks.

- The **Division of Food and Drugs** again functioned as the principal consumer-protection agency of state government in the areas of the safety of food, drugs, and other consumer products. During fiscal year 1985, the Division maintained several projects to ensure a safe and wholesome food supply for Massachusetts consumers:

- **Shellfish sampling and enforcement actions** were conducted in cooperation with the Division of Law Enforcement of the state Department of Fisheries, Wildlife, and Recreational Vehicles to prevent diseases related to contaminated shellfish.
- To prevent illness due to contaminated milk, a **comprehensive inspection and sampling program** in the milk industry was strictly enforced
- **Food salvage and reconditioning operations** for food and consumer products were closely watched by the Division to determine the suitability of these products for use by consumers.
- The drug control unit investigated **reports of drug losses or tamperings** in nursing homes and hospitals, and brought formal charges against 19 persons for drug diversions. Such activities helped reduce costs of care and prevented the drugs from entering the illicit market.

- To determine compliance with state **standards for ethylene dibromide (EDB)**, a cancer-causing agent, inspectors from the Division continued to monitor food products. Where levels exceeded the established standards, inspectors removed the products from the state's food supply.
- The Division developed several new initiatives to promote the health of the consumer and to reduce health care costs in the Commonwealth:
  - In April 1985, the Department issued the first regulations that permit **physician assistants and nurse practitioners to prescribe medicines for chronically ill patients**. Through the new registration program, the Department has created a pool of qualified, specially trained health professionals to provide care for a number of groups who had been underserved in the past — patients in nursing homes, patients in state institutions, people in homeless shelters, and the chronically ill who are cared for at home but who may have to be placed in health facilities if adequate home care is not available.
  - In a complementary move, the Department had earlier expanded the **state's generic drug list**, the Massachusetts List of Interchangeable Drugs, to include an additional 52 brand-name prescription drug products, and 126 new product strengths and dosage forms. These additions brought the number of interchangeable drug products in the state to more than 9,300, thus greatly reducing the cost of health care to consumers. It was estimated that the Massachusetts Medicaid Program would realize a savings of over \$2.5 million through the use of generic drugs in calendar year 1984. The list was mailed to approximately 30,000 pharmacists and physicians registered in Massachusetts.
  - New regulations requiring the **licensure of all institutions that use dogs or cats for research or teaching** were developed with the assistance of an advisory committee, and promulgated by the Public Health Council. The regulations ensure that dogs and cats used for research and teaching are handled and treated humanely. The Massachusetts Society for the Prevention of Cruelty to Animals and the Animal Rescue League of Boston were named by the Commissioner as official designees of the Department of Public Health to inspect institutions licensed under the new law.
  - Responding to public concern over residual levels of polychlorinated biphenyls (PCBs) in the food supply, the Division, in conjunction with the Center for Health Promotion and Environmental Disease Prevention, prepared an issue paper and proposed a **PCB tolerance level of 2ppm**, a level consistent with that of the FDA. The lowered tolerance level will aid consumers in determining what foods to purchase and what foods (especially certain species of fish) to avoid.





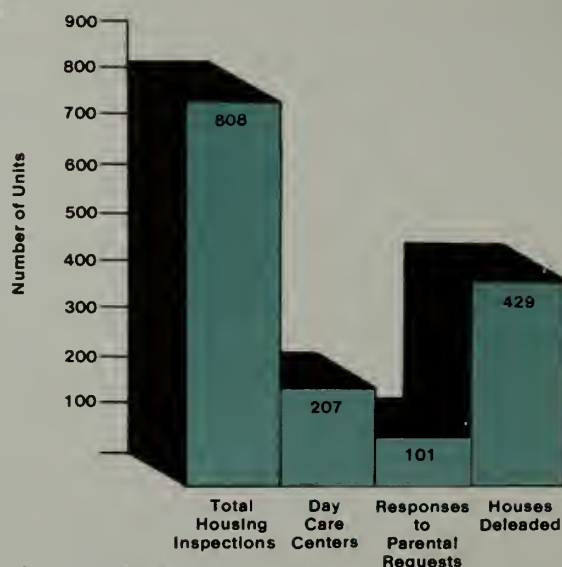
Nurse from Childhood Lead Poisoning Prevention Program screening for blood lead levels.

- **The Childhood Lead Poisoning Prevention Program (CLPPP)** continued its work to reduce the exposure of children under the age of six years to the hazards of lead poisoning. The Division provided screening for children who are at risk, distributed screening samples to health care providers, identified and worked to eliminate lead hazards in the environment, and conducted educational programs for both the medical and lay community on the health hazards of lead. During fiscal year 1985:

- **Approximately 142,000 children**, 38 percent of all children between the ages of six months and five years, **were screened for lead poisoning**, and **1,531 children**, or **1 percent**, **were identified as lead poisoned**. Laboratory staff analyzed 13,350 blood specimens, a 10 percent increase over the previous year, and 3,100 nonblood specimens for lead content. All lead poisoned children received coordinated medical and environmental follow-up.
- Division environmental inspectors made approximately **810 initial housing inspections** during fiscal year 1985 (Fig. 3), to reduce risk of housing-related illness and injury. The Division also organized three conferences for lead inspectors and deleaders, and extended training and technical assistance to local boards of health and to workers in the private sector.
- An important new program was begun in January 1985, when the Division began to offer **crisis intervention deleading services** through contracts with qualified deleaders throughout the state. The program seeks to provide safe, rapid, and thorough deleading services to eligible property owners and landlords in cases involving a seriously poisoned child in an effort to prevent further exposure.
- **Lead Poisoning Prevention Week**, which was held in June by proclamation of the Governor, opened a year-long campaign to inform the public of the serious health effects of lead poisoning. New educational materials that highlighted the role of dust and soil as important sources of lead were developed and widely distributed.

- The Division supervised the activities of **nine lead poisoning prevention projects** funded through the Maternal and Child Health Services Block Grant. Projects in Boston, Lawrence, Worcester, and New Bedford offered screening, case management, inspection and enforcement services. Projects in Salem and Springfield provided screening and case management, and two projects conducted screening in Holyoke and in high-risk cities in central Massachusetts. More than 16,000 children in high-risk areas, the largest annual total to date, were screened directly by project personnel.

Figure 3. Housing Inspections Carried Out by Lead Poisoning Prevention Program, Fiscal Year 1985.



Source: Lead Paint Poisoning Prevention Program.

• **The Division of Community Sanitation** assumed responsibility for three new programs in fiscal year 1985: Environmental Hygiene, the Right-to-Know Program, and the Urea Formaldehyde Foam Insulation (UFFI) Repurchase Program:

- Staff of the Environmental Hygiene Program worked with housing officials in the City of Lowell on **compliance with sections of the State Sanitary Code that relate to housing**. Simalar training programs were held in Fall River, New Bedford, Salem, Haverhill and Boston.
- During the year, staff of the Environmental Hygiene Program also maintained its **inspection of various facilities throughout the state** (Table 2). Visits resulted in the improvement of environmental sanitary conditions in recreational and farm labor camps. Inspection of housing units resulted in the correction of a large number of violations, thereby reducing the potential for disease and injury to the occupants. Conditions in correctional facilities have improved considerably since the initiation of a routine, comprehensive inspection program by the Department. Cooperating with the Division of Dental Health's Fluoridation Program, staff sanitarians performed quarterly inspections of fluoridation equipment in communities with fluoridated public water supplies.
- Under the provisions of the **Massachusetts Right-to-Know Law**, the Department has begun to meet its responsibilities including: establishment and annual amendment of the Massachusetts Substance List (MSL), a compilation of 1,600 substances which may be dangerous to workers' health or safety if improperly stored, used or handled; review and

final determination of trade secret and research laboratory exemption applications (during the fiscal year, the Department received 47 trade secret exemption applications, representing 524 substances, and 175 applications from 301 research laboratories); ensuring the release of trade secret information on a confidential basis to medical and physician-supervised nonmedical personnel; and dissemination of information on the health effects of toxic or hazardous substances to the public and private sectors. Training seminars were held for staff in the Boston and regional health offices, and 21 such seminars were conducted for industrial and commercial groups throughout the state.

- To reduce family exposure to the concentrations of formaldehyde present in homes where **urea formaldehyde foam** had been used as an insulating material, the Department promulgated new **repurchase regulations**. Under these regulations, any person in whose home UFFI was installed can request the installer, distributor or manufacturer to pay for the removal of the foam. During the fiscal year, 1,582 requests were received. Although no levels of safety had been established, the presence of any formaldehyde was deemed to produce unnecessary health risks.

• **The Radiation Control Program** maintained its responsibility of protecting the public from both ionizing and nonionizing sources of radiation. To reduce the incidence of disease caused by ionizing radiation, the program:

- Carried out **1,400 surveys of diagnostic x-ray units** in hospitals, private medical and dental offices, as well as inspections of nuclear medicine departments and users of radiosopes. A special survey was conducted to study radiation safety efforts at hospitals and clinics relating to patient exposure during routine chest x-rays. To protect the consumer from other sources of man-made radiation and emissions from electronic products, program personnel also surveyed color TV receivers, video display terminals, devices that use lasers, sun tanning lamps, and various consumer products containing radioactive materials.
- Continued **environmental surveillance and inspection of fixed nuclear power stations**, two in Massachusetts and one in Vermont on the Massachusetts border. Personnel visited the sites every week to ensure the proper operation of the monitoring equipment. Staff participated in full-scale emergency response exercises at the three nuclear facilities, and conducted a series of training programs for emergency workers in the 10-mile emergency planning zone around the Pilgrim, Rowe, Vernon and Seabrook nuclear power plants to ensure the capability of the workers to protect the health and safety of the residents in an emergency.
- Participated in the **U.S. Department of Energy's Crystalline Repository Project**. Participants have been examining 236 crystalline rock formations in the 17 states granted study awards to identify potentially acceptable sites for the burial of high-level radiation waste.

**Table 2.**  
**Summary of Activities**  
**Environmental Hygiene**  
**July 1, 1984 - June 30, 1985.**

| <b>Facilities</b>       | <b>Activities</b>   |
|-------------------------|---|
| Housing                 | 433 Initial inspections<br>59 Reinspections<br>12 Assumptions of jurisdiction                   |
| Correctional Facilities | 24 State facility inspections<br>25 County facility inspections<br>33 DYS facility inspections* |
| Lock-ups                | 178 Inspections   |
| Recreational Camps      | 42 Inspections  |
| Fluoridation Sites      | 292 visits  |
| Farm Labor Camps        | 62 camp certifications<br>(573 workers)   |

\*DYS = Division of Youth Services.



# Enhancing Patient Services and Health Care Cost Containment

The Department carries out its mandate — “To maintain, protect and improve the health and well-being of the people” — not only through its programs of direct services, but through programs of standard setting for food, water, air, and health care quality. In addition, the Department fulfills its mandate through monitoring, surveillance, licensure and review, and through controlling health care costs wherever possible. The Department’s seven hospitals also provide a broad range of preventive, curative, and rehabilitative services to ensure all residents of the Commonwealth high quality, affordable care.

## Highlights



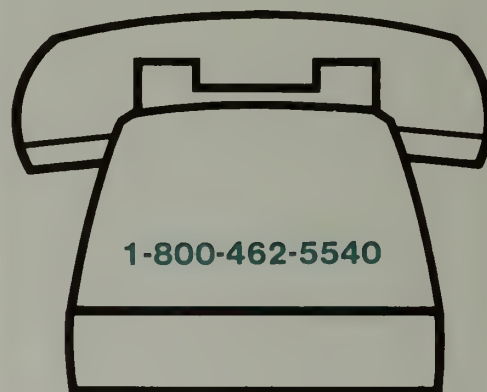
The Division of Health Care Quality issued licenses to the first two birthing centers in the state under newly promulgated regulations.



The Department established an organ transplantation policy that sought to ensure that organ transplants are introduced into the state in a controlled, phased manner.

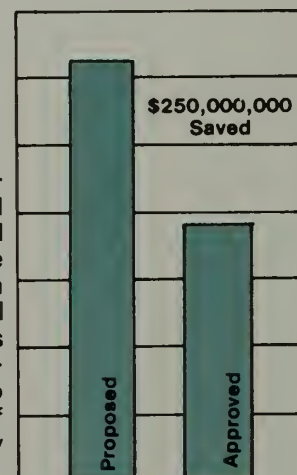


The Department’s seven public health hospitals developed a number of new services and programs, among them a Short-Term Alcohol Rehabilitation and Treatment Program at Lakeville Hospital, a Respite Care Program at Rutland Heights Hospital, a Driving Under the Influence Unit at Tewksbury Hospital, and a palliative care unit for AIDS patients at Western Massachusetts Hospital.



The Division of Health Care Quality also intensified its public information campaign on patient abuse and established a toll-free reporting hotline, resulting in about a 15 percent increase in the number of complaints of abuse, mistreatment or neglect over the previous year.

The Department’s Determination of Need Program (DoN) saved the Commonwealth more than \$250 million in health care costs in fiscal year 1985 through its review of DoN applications. DoN staff also reduced the backlog of pending applications by 59 percent.



## Services to Ensure Quality Health Care

In fiscal year 1985, the **Division of Health Care Quality**, which is responsible for setting the criteria in a health care system that includes more than 1,500 health facilities (hospitals, nursing homes, rest homes, clinical laboratories, blood banks, home health agencies, hospices, state schools, and community-based intermediate care facilities for the retarded), continued to ensure high quality, preventative, curative, and rehabilitative health care to residents of the Commonwealth. In addition, the Division certified that 930 facilities or services were meeting state and federal standards required for participation in the Medicaid and Medicare Programs. The Division's activities included:

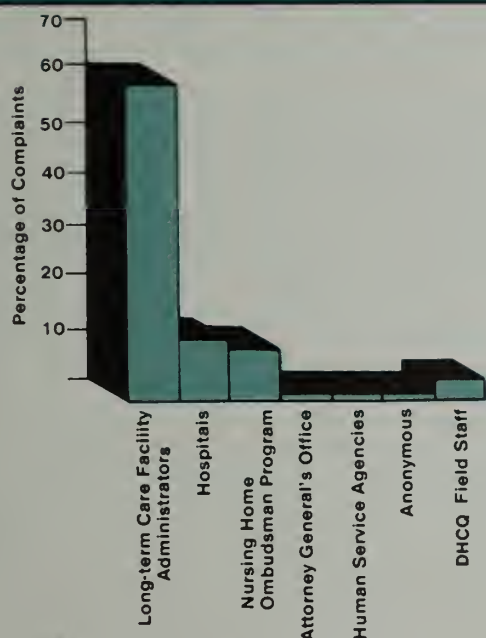
- **Through its program of licensure and certification, safeguarding patients from:** patient abuse, mistreatment, and neglect, misuse of patient's personnel funds, poor sanitary conditions, inaccurate laboratory results, inappropriate use of body restraints, misuse of drugs, too few or inadequately trained staff, inaccurate medical records, improper disposal of infectious hazardous waste, ambulances without proper or working equipment, and fire safety hazards.

- **Investigating and, where appropriate, taking action on approximately 210 complaints of abuse, mistreatment or neglect of patients at the facilities it licenses (Fig. 4).** This is an increase of about 15 percent over the previous year, the result of a stepped up campaign of public information and the establishment of a toll-free patient abuse hot line. Approximately 50 percent of all complaints of patient abuse were found to be justified. To protect the health and safety of patients, Division staff worked to ensure that the facility took necessary action to prevent further instances of patient harm.

**Initiating action to revoke the licenses of 11 substandard operators of long-term care facilities** and to decertify 17 substandard nursing homes from the Medicaid Program. Staff also recommended Medicare decertification of two hospitals, one nursing home and one End Stage Renal Dialysis service. During the first six months of 1985, the Division investigated 256 complaints, a dramatic 60 percent increase over the same period in 1983. During the year, the Division appointed a two-member complaint investigation team to provide timely investigations of all complaints. As a result, the "turnaround" time for completion of a report on each complaint has been reduced to 25 days as compared to the six-to-seven week average in 1983.

**Carrying out research studies, evaluations of innovative projects, and development of new or revised regulations** to identify and respond to changes in the health care delivery system. These included: completion of a survey of approximately 1,200 rest home residents in 55 facilities to determine the relevance of current licensing standards to meet the needs of these residents; issuance of licenses to the first two birthing centers in the state under newly promulgated regulations; issuance of licenses to 36 clinical laboratories in physicians' offices under new laboratory licensing regulations that ensure the accuracy of data used by physicians for diagnosis and for monitoring treatment regimens; convening a Hospice Advisory Committee to assist in the development of hospice licensing regulations; and studying hemodialysis equipment and services provided by hospitals and free standing centers throughout the Commonwealth to identify and select areas that may require regulatory action to prevent malfunctioning of equipment of consequent danger to dialysis patients.

Figure 4. Source of Patient Abuse Complaints Received by Division of Health Care Quality, Fiscal Year 1985.



Source: Division of Health Care Quality.



## Services to Provide Extensive Hospital Care

The Department of Public Health has **seven hospitals** equipped for a broad range of clinical services intended especially to meet the needs of long-term disabilities. To respond to the increasing demand for health services to an expanding population, these hospitals have assumed a more direct role in serving the regions in which they are located. They now provide preventive, therapeutic, and rehabilitative services that are often difficult to obtain through the private sector. The seven hospitals admitted 5,709 patients during the fiscal year. The average length of stay varied from 20.8 days at the main unit of the Lemuel Shattuck Hospital to 1,962 at the Cushing Hospital (Table 3). During the fiscal year, the hospitals developed a number of new services and programs to complement existing activities:

- **Cushing Hospital**, a chronic disease hospital for the elderly, became part of the Department of Public Health early in the fiscal year. In addition to providing a variety of clinics and a day care center for the elderly, the hospital conducted health fairs, wellness workshops, "healthy days", and related programs to provide a broad spectrum of health promotion services and information for older citizens.

- **Lakeville Hospital**, responding to the state's need for additional Driving Under the Influence (DUI) Programs for second offenders, implemented its Short-Term Alcohol Rehabilitation and Treatment (START) Program. Within three months, a separate building was renovated, staff hired and trained, and a 60-bed unit opened. The hospital recorded a higher patient census than in the previous fiscal year as a result of a concerted effort to admit active rehabilitation patients, thus allowing a higher turnover. Approximately three-quarters of the patients were discharged to their homes. The hospital also provided care to patients who require the support of a ventilator for long periods of time.

- **Lemuel Shattuck Hospital** continued to provide inpatient care to patients suffering acute episodes of chronic illness and outpatient follow-up. Clients of the Departments of Correction and Mental Health received medical and surgical services. Occupancy remained high — 92 percent. Services to the homeless were supported during the year and shelter guests were helped to make the transition from homelessness to employment and housing. The hospital also continued to operate its unique chronic pain facility and sleep research study.

- **The Massachusetts Hospital School** has, since the turn of the century, provided comprehensive health and educational services to the physically handicapped, intellectually able children of the Commonwealth. To encourage the growth of the handicapped child into a well-adjusted adult, the hospital maintains its independent residential living program. In addition, the young people have actively participated in wheelchair competitions at the state, regional, and national levels. In the Junior Wheelchair Olympics, one patient at the school broke several national records and was deemed a world-class athlete. The facility also helped more students than in previous years to find internship programs at computer and high tech industries, thus setting the basis

for possible future employment. The number of affiliations of medical schools and colleges with the Hospital School for specialized training continued to grow. Students came from as far away as Michigan.

- **The Rutland Heights Hospital**, long noted for its expertise in the treatment of alcoholism, enlarged the bed capacity of its 14-Day Residential Alcoholism Program for persons charged with a second drunk driving offense from 131 to 150 to meet the large number of referrals. During the fiscal year, 3,287 clients were admitted. The four-bed Respite Care Program, designed to meet the needs of families caring for the sick and disabled at home, became fully operational and admitted 70 patients during the year. By the end of the fiscal year, Rutland Heights Hospital had finalized plans for a new 20-bed inpatient unit for the treatment of adolescents with drug and alcohol problems. The unit will be the only one of its kind in central Massachusetts.

- **Tewksbury Hospital** opened its Driving Under the Influence Unit for second offenders in May 1985. Since then, it has been operating at 90 percent of capacity, and 167 clients have completed the 14-day treatment program. In addition to its programs for second offender drunk drivers and the homeless, Tewksbury Hospital, the oldest chronic disease hospital in the state, cooperated with a diverse group of community organizations such as the Clinical Pastoral Education Program, the Day Care Center for children of working mothers with low incomes, Head Start, and the Independent Living Program.

- **The Western Massachusetts Hospital**, which operates inpatient and outpatient programs for both adults and children, maintained two of its programs for the seriously ill: a palliative care unit for the terminally ill, and its nationally recognized coma unit. During the year, the hospital opened a much needed palliative care unit for AIDS patients. The hospital also operates Kamp for Kids, a day camp for both able and multi-handicapped children, and constructed a challenge course for the camp to assist participants develop not only motor skills but also confidence in themselves.



Summer Olympics at Tewksbury Hospital.



Cushing Hospital patient receiving physical therapy.

**Table 3.**  
**Public Health Hospitals**  
**Annual Census Summary — July 1, 1984 - July 30, 1985.**

| Hospitals                         | Admissions   | Discharges   | Days           | Stay*    | Census   | Visits        |
|-----------------------------------|--------------|--------------|----------------|----------|----------|---------------|
| Cushing Hospital                  | 67           | 6            | 124,591        | 1,962.0  | 368.0    | —             |
| Lakeville                         | 361          | 342          | 33,592         | 90.8     | 75.7     | 11,796        |
| Lemuel Shattuck                   |              |              |                |          |          |               |
| Main                              | 1,644        | 1,530        | 45,268         | 20.8     | 129.9    | 18,710        |
| Medical Geriatric                 | 55           | 53           | 10,830         | 938.0    | 38.8     | 35            |
| Bay Cove (Mental Health patients) | 526          | 524          | 23,301         | 36.8     | 66.3     | 483           |
| Mass. Hospital School             | 131          | 115          | 26,917         | 313.5    | 102.0**  | 1,609         |
| Rutland Heights Hospital          |              |              |                |          |          |               |
| Chronic                           | 418          | 398          | 33,045         | 86.7     | 95.9     | —             |
| DUI†                              | 1,694        | 1,753        | 22,459         | —        | 126.0    | —             |
| Tewksbury                         |              |              |                |          |          |               |
| Main                              | 242          | 73           | 263,261        | 1,388.0  | 721.0    | —             |
| Nichols (Homeless men)            | 290          | 288          | 51,172         | 152.5    | 148.0    | —             |
| Western Mass. Hospital            | 281          | 127          | 28,898         | 86.4     | 72.6     | 8,630         |
| <b>TOTAL</b>                      | <b>5,709</b> | <b>5,209</b> | <b>663,334</b> | <b>—</b> | <b>—</b> | <b>41,263</b> |

\*Stay represents number of days.

\*\*Average daily census at the Massachusetts Hospital School has been adjusted to reflect enrollment days.

†Driving Under the Influence Program.

Source: Office of Local Health Services and Regional Operations





Challenge course at the Western Massachusetts Hospital Kamp for Kids.

## Services to Meet Organ Transplant Needs

In the absence of a national policy, the Department has become increasingly involved in the past two years in the development of a state policy on organ transplantation. In December 1984, the Department announced the adoption of a policy based on the work of two state task forces appointed to examine specific issues related to liver transplantation and the general issues of organ transplantation. Major points of the policy sought to ensure that organ transplants are introduced into the state in a controlled, phased manner, and that criteria for patient selection for the procedures are public, fair, and equitable, and designed to offer transplantation to patients who can benefit the most from it, regardless of ability to pay or insurance status. During the fiscal year, staff of the organ donation, procurement, and transplantation program made substantial progress in several areas:

- Staff reviewed and recommended **approval of the application of the Boston Center for Heart Transplantation** for the implementation of heart transplantation in the state. In approving the application, the Department authorized a three-year trial period for the service. Conditions for the approval required the Center to guarantee access to the procedure and a limit on the drain on other resources.

- The Department authorized several **exemptions from the Determination of Need (DoN) process for research programs in pancreas transplantation**. The procedure, still considered experimental, has not yet been covered by public and private reimbursement. Patients receiving pancreas transplants during the one-year period will be covered by research money rather than by patient care funds.

- **The Organ Transplant Fund**, authorized by Chapter 693 of the Acts of 1983, became operational in fiscal year 1985. Through their income tax returns, more than 37,000 residents of the state contributed \$184,000 to the fund, which was established to pay for all or a part of the costs of organ transplantation for Massachusetts residents. The fund will be used to assist patients in paying for immunosuppressive drugs and other out-of-pocket expenses associated with their transplants.

## Services to Control Health Care Costs

The primary goal of the Department's **Determination of Need (DoN) Program** continued to be to ensure the people of the Commonwealth appropriate access to good quality health care at the lowest reasonable cost. Through the DoN program, the Department worked to prevent unnecessary building of new facilities or expansion of existing facilities to avoid wasteful duplication of services and facilities. Such duplication contributes to spiraling health costs and reduces the quality of services. During the fiscal year, DoN staff:

- **Completed reviews of 179 proposals**. Of the \$634,072,140 in capital costs reviewed, \$377,906,955 (59 percent) were approved; \$256,165,145 of the costs, which would have entered the health care system, were found to be unnecessary. Applications ranged from several large projects to numerous smaller projects eligible for "delegated review." The "delegated review" process expedited smaller projects with limited effect upon cost or health service organization by allowing the Commissioner to approve applications for such projects without review by the Public Health Council.

- **Achieved its goal of substantially reducing the backlog of pending projects**. Pending applications have been reduced from 325 to 212, a reduction of 59 percent. Fewer than 90 applications have been pending for longer than 10 months. Expeditious review of projects has helped to keep projects at their original estimated costs.

- **Generally revitalized the program**, which was able to respond more quickly and effectively to the demands of the health care system.

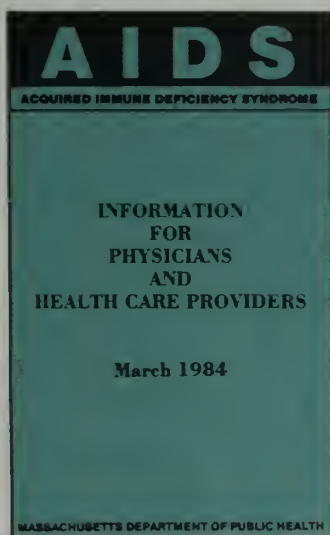
# Controlling Communicable Diseases

The Department carries out health surveillance and disease control activities to protect the health of the people of the Commonwealth through testing, vaccination, treatment, analysis of disease trends, and the assessment of threats to the population. To strengthen the Department's programs in the control of communicable diseases, the Divisions of Communicable Diseases and Tuberculosis Control and the State Laboratory Institute were consolidated in the last fiscal year into a new Center for Laboratories and Communicable Disease Control, located in the Theobald Smith Health Facility in Jamaica Plain.

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## Highlights

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Statewide efforts provided needed counseling and testing services for persons with Acquired Immune Deficiency Syndrome (AIDS).



Analyses of toxic chemicals such as polychlorinated biphenyls (PCBs) received considerable attention in fiscal year 1985.



Capability for analyses of illicit drugs was virtually doubled with the implementation of a supplementary budget for forensic drug laboratory work.



Diphtheria, tetanus, and pertussis (DPT) immunization continued uninterrupted in the state. In addition, the Massachusetts Legislature enacted a bill filed by the Department to require up-to-date immunization status of all entering college and postgraduate students.



## Services to Prevent Disease

During fiscal year 1985, the **Center for Laboratories and Communicable Disease Control** concentrated its efforts on emerging health problems while maintaining the quality of its on-going services (Table 4):

- **Statewide efforts provided needed counseling and testing services for persons with Acquired Immune Deficiency Syndrome (AIDS).** The number of cases continued to increase among high-risk groups at a significant doubling rate (Fig. 5). The Department provided state support to the Governor's Task Force on AIDS which, in conjunction with the Massachusetts AIDS Research Council, channeled state funds to medical researchers and health care providers for projects to advance knowledge, improve the treatment, or identify potential therapeutic agents for AIDS. As a result of the work of the task force and the Department, AIDS was made a reportable disease. By the end of the fiscal year, steps had been taken to create an office within the Department to help manage the state's AIDS activities and to hire a state AIDS Coordinator.

- **Tuberculosis was identified as a serious problem among the state's homeless population.** The development of laboratory and epidemiologic data enabled state and city health agencies to mount a strong case-finding effort, identifying tuberculosis among the homeless, and referring affected individuals for appropriate treatment. Follow-up indicated the effectiveness of therapy and also revealed the difficulty and cost of reaching at-risk populations out of the mainstream of society.

- **Refugee health problems received special attention** through the use of federal grants and intensive community work with field coordinators. The Department has been working to develop new means of delivering health services to newer immigrant groups, such as Cambodians and Thais, to prevent serious illness, high infant death rates, and impairment of future health.

- **Diphtheria, tetanus, and pertussis (DTP) immunization continued uninterrupted in the state.** Massachusetts was unique among the states in its ability to provide adequate supplies of DTP vaccine for children. In addition, Massachusetts was able to meet emergency requests for DTP vaccine, manufactured at the state Biologic Laboratories, for school immunization clinics in neighboring states that were unable to obtain sufficient supplies from commercial sources.

- **Major measles outbreaks occurred in Massachusetts colleges** as well as throughout college campuses in the country. Communicable Disease Control staff worked closely with college health services and local health departments to control these outbreaks. Approximately 30,000 doses of vaccine were distributed to 56 colleges; special vaccination clinics were established, and quarantine advisories issued when necessary. The

**Table 4.**  
**Center for Laboratories and**  
**Communicable Disease Control**  
**Laboratory Services**  
**July 1, 1984 - June 30, 1985.**

| Program (unit of measure)                      | Number           |
|--|------------------|
| <b>Biologics (immunizing doses produced)</b>   |                  |
| Serums   | 121,934          |
| Vaccines                                       | 922,480          |
| <b>Total number of human doses</b>             | <b>1,044,414</b> |
| <b>Newborn Screening (children tested)</b>     |                  |
| Massachusetts                                  | 82,115           |
| Other New England states                       | 87,884           |
| <b>Total number of children screened</b>       | <b>169,999</b>   |
| <b>Microbiology (samples tested)</b>           |                  |
| Bacteriology                                   | 120,529          |
| Mycobacteriology                               | 29,932           |
| Virology and rabies                            | 13,892           |
| Serology                                       | 113,713          |
| Clinical investigations                        | 5,525            |
| <b>Total number of samples</b>                 | <b>283,591</b>   |
| <b>Food and Environmental (samples tested)</b> |                  |
| Food safety                                    | 10,994           |
| Environmental/human exposure                   | 2,070            |
| <b>Total samples tested</b>                    | <b>13,064</b>    |
| <b>Drug Analysis (samples tested)</b>          |                  |
| Cocaine  | 8,245            |
| Heroin   | 7,603            |
| Marijuana                                      | 46,164           |
| Other controlled substances                    | 10,991           |
| <b>Total samples tested</b>                    | <b>73,003</b>    |



Laboratory staff conducting HTLV III antibody test for AIDS.

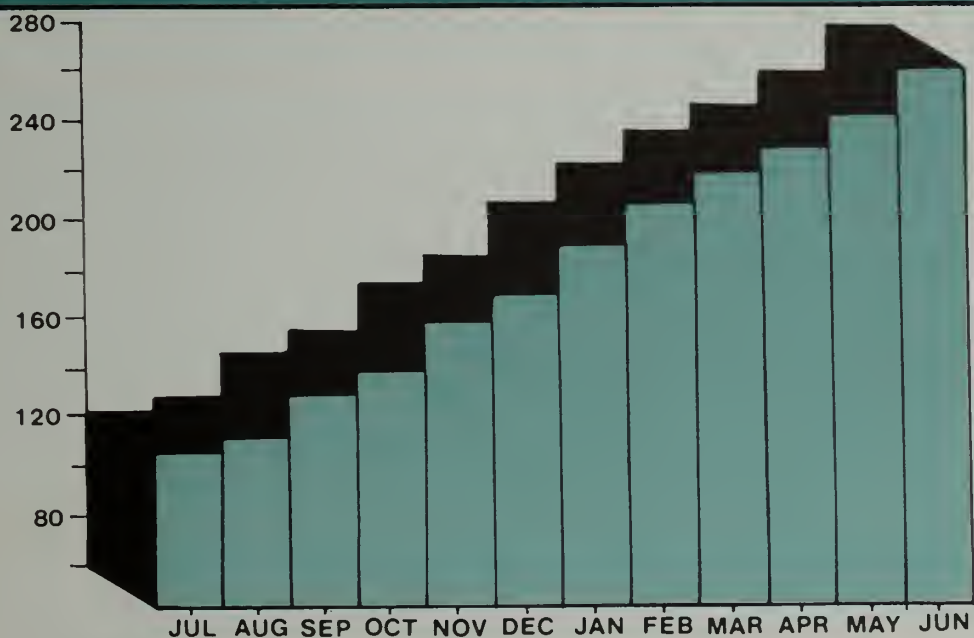
Massachusetts Legislature enacted a bill filed by the Department to require up-to-date immunization status of all entering college and postgraduate students. It is expected that implementation of the law will help prevent future outbreaks.

- **Lyme Disease, a tick-borne infection, was recognized more frequently on the North Shore.** This is a major new site outside the endemic focus on Cape Cod and the Islands. Communicable Disease Control staff provided increased laboratory testing services, as well as consultation and information on prevention to physicians in the affected areas. By adding Lyme Disease to the Department's list of reportable diseases, identification of "hot spots" for investigation by state epidemiologists will be facilitated.
- **Outbreaks of foodborne diseases were investigated in restaurants, hospitals, nursing homes, schools and large group picnics.** Salmonella, campylobacter, shigella and Norwalk virus were the major groups of organisms confirmed by the laboratory. Findings from epidemiologic and laboratory investigations provided a sound basis for public health intervention.
- **Venereal disease control programs underwent a major review** to determine the effectiveness of service delivery to critical areas. Planned changes, including the requiring of treatment protocols, cost control for the Department of Public Health, and introduction of testing services for chlamydia, will now be implemented.

Services to Ensure Healthy Infants

- The basic screening services that identify treatable disorders operated effectively during the year, and all newborn infants in Massachusetts were tested.
- **New program initiatives were added to the programs** to prevent hypothyroidism, phenylketonuria (PKU), homocystinuria and other amino acid disorders.
  - **A follow-up laboratory study was performed** to determine the feasibility of using the newborn blood sample already submitted for screening to test for the infectious disease toxoplasmosis, which can cause blindness or mental retardation in children who may have a silent infection at birth. A pilot toxoplasmosis screening program to determine the prevalence of infection in newborn infants and to assess the utility of a regular screening program received new state funding support.
  - **Collaborative work with Boston City Hospital** to assess the effects of drug abuse in pregnancy got underway under a grant from the National Institute on Drug Abuse. Laboratory analyses were being done to determine accurately drug abuse in pregnant women as an aid to clinical studies in assessing the relation of drug abuse to birth defects. These studies can lead to improvement in prevention, care, and control of risks to the normal development of the fetus and a healthy newborn.

Figure 5. AIDS Surveillance Cumulative Cases in Massachusetts, Fiscal Year 1985.\*



\* Includes 56 Non-Massachusetts Cases.  
Source: Center for Laboratories and Communicable Disease Control.





Taking newborn blood sample to test for PKU and other metabolic disorders.

### Services to Meet Vaccine and Serum Needs

Despite the on-going work of a difficult renovation of the Biologic Laboratory facility, the production and distribution of vaccines and serums proceeded on schedule and met the needs of the Commonwealth. Newer specialty products, i.e., Varicella Zoster and CMV Immune Globulins, were produced and used in disease treatment and prevention for seriously ill patients.

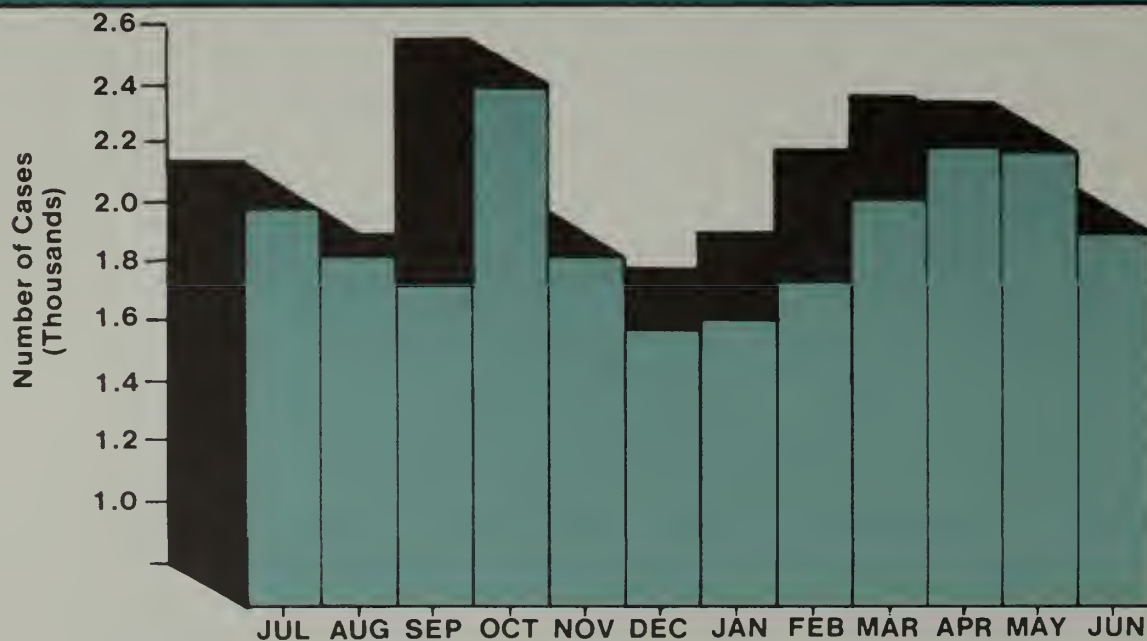
### Services to Analyze Toxic Exposures

Programs to meet the rapidly growing demands for measuring or estimating human exposure to toxic chemicals were maintained and new ones developed. Analyses of toxic chemicals received considerable attention in fiscal year 1985. Included were levels of polychlorinated biphenyls (PCBs) in serum specimens from participants in the Greater New Bedford Health Effects Study and from specimens taken from lobster and fish, and residues of pesticides in food, with specific emphasis on monitoring of ethylene dibromide (EDB). Food sampled in Massachusetts after the introduction of regulations no longer had high levels of EDB.

### Services to Analyze Illicit Drugs

An initiative to increase analytical services to law enforcement agencies was implemented with the passage of a supplementary budget for forensic drug laboratory work. Capability for analyses was virtually doubled to meet the demands of expanded law enforcement efforts to control drug abuse and trafficking. Drug samples were submitted to the laboratories in record numbers during the year, with cocaine emerging as a major contributor to the drug trafficking problem in Massachusetts (Fig. 6).

**Figure 6. Drug Cases Received for Analysis, Fiscal Year 1985.**

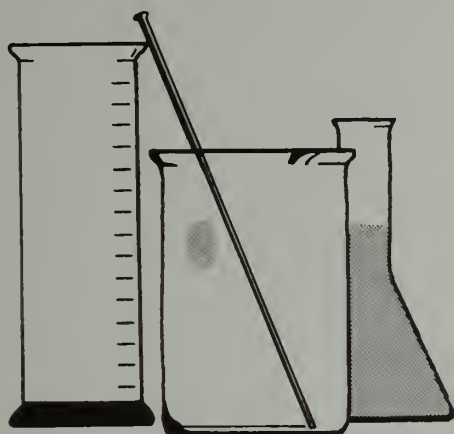


Source: Center for Laboratories and Communicable Disease Control.

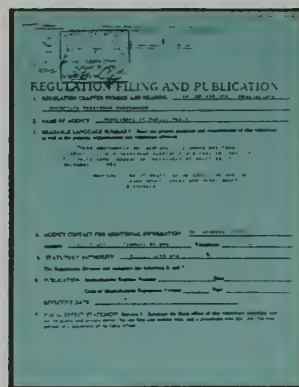
# Providing Support Services

To assist the program units and divisions in carrying out their assigned responsibilities, the Department of Public Health staffs other divisions and offices whose main tasks are support and coordination of services.

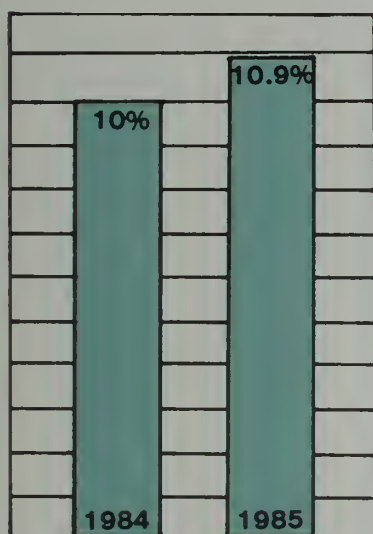
## Highlights



The Research and Epidemiology Unit of the Division of Health Statistics and Research cooperated with the National Institute for Safety and Health (NIOSH) to study the relationship of occupation to cancer and birth outcomes.



The Office of General Counsel helped to develop more than 20 sets of new regulations.



The work of the Division of Human Resources and the Affirmative Action Office resulted in an overall increase of minority employees in the agency from 10 to 10.9 percent.



The Office of Public Information and Health Education issued 70 press releases, arranged seven news conferences, responded to nearly 2,000 inquiries, and helped plan four statewide public education campaigns during the last fiscal year.



## Services for Coordinated Health Data and Statistics

Statistics compiled by the **Division of Health Statistics and Research** have become increasingly important as a guide to the Department in setting priorities, formulating and implementing health policy decisions, and evaluating program results. The officially designated Massachusetts Center for Health Statistics, the Division provides coordination of health data among agencies that collect and use such data, and statistical standards and technical assistance to users of health and demographic data. Among the Division's major activities in fiscal year 1985 were:

- The preparation of completely revised 1982 and 1983 editions of the **Annual Report of Vital Statistics**.
- Preparation of the **Massachusetts Cancer Registry's 1983 Report of Cancer Incidence in Massachusetts**. The increasing number of cases of lung cancer throughout the state, especially in women, was one of the important findings (Fig. 7). Cancer Registry data served as an important resource for other divisions of the Department, principally the Center for Health Promotion and Environmental Disease Prevention.
- Initiation by the **Research and Epidemiology Unit** of a cooperative agreement with the National Institute of Safety and Health (NIOSH) to develop an analytical surveillance system of the relation of occupation to cancer and birth outcomes.
- Initiation of a case-control study, funded by the federal Environmental Protection Agency, to determine the effects on cancer mortality of **chlorine and chloramine in drinking water in 54 towns**.
- Preparation of the **Massachusetts Chart Book**, a comparison of patterns of mortality in Massachusetts at the beginning and end of the past decade, as well as comparison of Massachusetts mortality data with those of the United States.

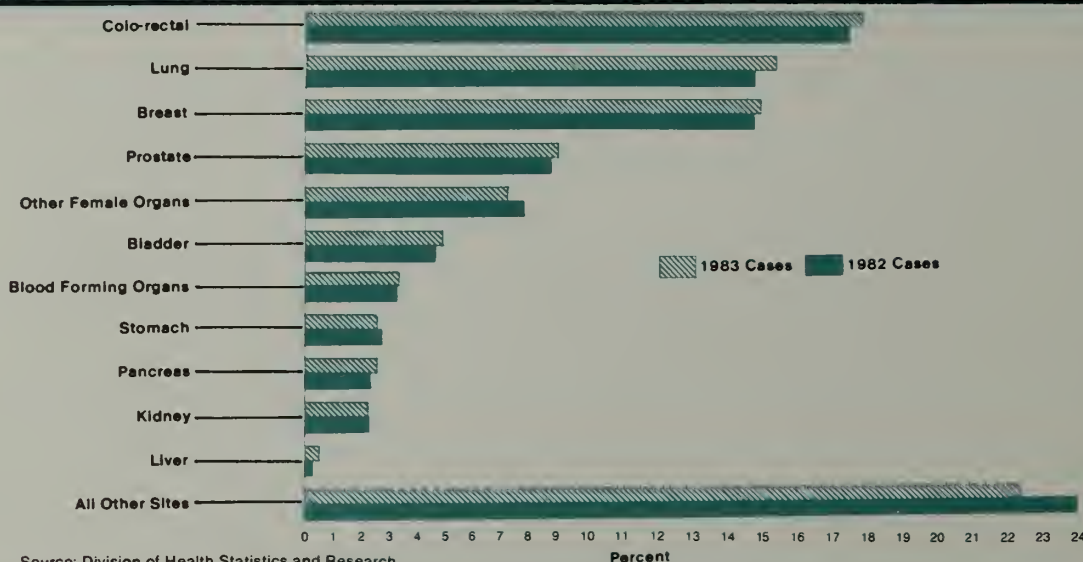
### Services to Develop Long-Range Planning

The **Office of Policy and Planning** coordinated all legislative activities for the Department, proposed policy recommendations on agency priorities and programs, and acted as a liaison with constituent groups of health providers and consumers in the state. During fiscal year 1985, the Office coordinated testimony and tracked the progress of 15 bills filed by the Department and of 400 health-related bills supported by the Department.

### Services to Provide Legal Support

The **Office of the General Counsel** served as the legal liaison between the Department and the public. It provided the legal knowledge and support required by other divisions in promulgating regulations to protect the health and safety of the people of the Commonwealth. New regulations on ambulance licensure, food establishments, abuse and neglect of nursing home patients, the care of laboratory animals used for research, and the prescribing of medications by nurse practitioners and physician assistants were among the more than 20 sets which Office staff helped to develop.

**Figure 7. Massachusetts Cancer Incidence by Site, 1982, 1983.**



## Services to Centralize Administrative Support

Within the **Bureau of Management Services** are located the Divisions of Data Processing, Budget, and Human Resources, the Offices of Employee Relations, Affirmative Action, and Central Services, and the Central Library. Among the accomplishments in fiscal year 1985 of these units, which provide central administrative support services to the Department, were:

- **The assurance of equal opportunity to all employees of the Department.** The Division of Human Resources and the Affirmative Action Office assisted various divisions in the employment of an additional 110 minority persons during the fiscal year, raising the total number in the Department to 534, an overall increase from 10 percent to 10.9 percent. In addition, an agreement was completed and signed with the U.S. Office for Civil Rights ensuring that the Department is in compliance with federal laws and regulations in its practices for hiring, providing proper working conditions, and promoting personnel who are handicapped. The Department also implemented the Governor's Minority Business Enterprise Program in which funds were specified for goods and services to be provided by minority owned or managed businesses, and a telephone device for the deaf was installed to allow the hearing impaired to communicate directly with the Department.
- **The participation of the Department in the Commonwealth of Massachusetts Paper Recycling Program,** organized through Central Services. In addition to saving a valuable resource, the program offers regular employment to persons with developmental disabilities.
- **The subsidizing of the libraries at the Rutland Heights Hospital and the Massachusetts Hospital School to do computerized literature searches on the National Library of Medicine's data bases,** thus bringing the number of the Department's libraries providing such searches to five. In addition, in the Department's Central Library, the use of computer

search services more than doubled during the year. At the same time, the requests for material, articles, and books increased to nearly 3,000. The Central Library is now able to send requests for material to over 4,900 public, academic, corporate, and governmental libraries by using the nationwide computer system.

## Services to Disseminate Information

**The Office of Public Information and Health Education** continued its activities designed to keep the public up-to-date about health issues. In fiscal year 1985, the Office:

- Issued 70 press releases.
- Arranged seven news conferences.
- Responded to nearly 2,000 inquiries from the press, the public, and legislators.
- Assisted in the coordination of four statewide public education campaigns.
- Developed public service announcements, brochures, pamphlets, and fact sheets that, among other topics, alerted the public to the dangers of fetal alcohol syndrome, the effects of the threat of nuclear war on children, and the facts about DES.
- Issued a major publication, "Ten Initiatives to Improve Public Health in Massachusetts," which was distributed state and nationwide.
- Organized a series of Public Health Rounds programs that included, among others, a three-session "Access to Health Care: Who's Losing Out and Why?", a session on children growing up in the nuclear age, and a session on lead in gasoline.

By the end of the fiscal year, the Office was collaborating with other divisions within the Department on plans for educational campaigns in fiscal year 1986 on the early warning signs of heart attack, the common risk factors for the three leading causes of death (heart attack, cancer, and stroke), and the prevention of infant mortality.



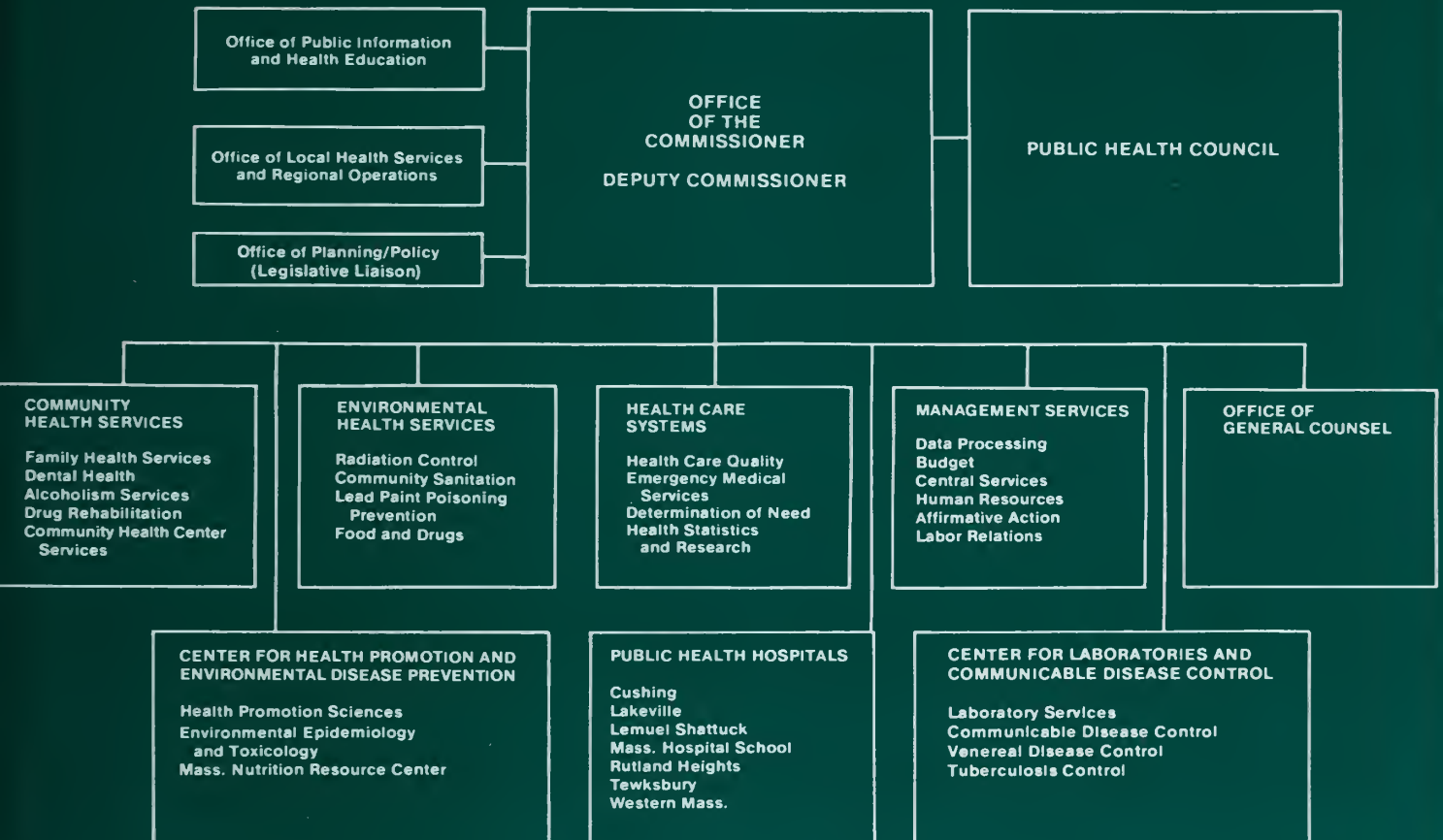
Children in Family Health Services slide tape show "Every Family A Healthy Family".



**Department of Public Health Expenditure Report**  
**July 1, 1984 - June 30, 1985.**

|   | STATE                | FEDERAL             | TOTAL                |
|---|----------------------|---------------------|----------------------|
| <b>COMMISSIONER'S OFFICE</b>  | 994,767              | —                   | 994,767              |
| <b>MANAGEMENT SERVICES</b>  | 3,170,581            | —                   | 3,170,581            |
| <b>GENERAL COUNSEL</b>  | 204,383              | —                   | 204,383              |
| <b>Sub-Total</b>  | <u>4,369,731</u>     | <u>—</u>            | <u>4,369,731</u>     |
| <b>CENTER FOR HEALTH PROMOTION &amp; ENVIRONMENTAL DISEASE PREVENTION</b> |                      |                     |                      |
| Environmental Epidemiology & Toxicology                                   | 250,525              | 11,747              | 262,272              |
| Health Promotion Sciences   | 747,391              | 703,284             | 1,450,675            |
| <b>Sub-Total</b>  | <u>997,916</u>       | <u>715,031</u>      | <u>1,712,947</u>     |
| <b>OFFICE OF LOCAL &amp; REGIONAL HEALTH SERVICES</b>                     | 715,218              | 75,000              | 790,218              |
| <b>COMMUNITY HEALTH SERVICES</b>  |                      |                     |                      |
| Family Health Services  | 21,139,303           | 34,350,300          | 55,489,603           |
| Dental Health   | 2,449,585            | 251,000             | 2,700,585            |
| Community Health Centers  | 1,159,184            | —                   | 1,159,184            |
| Alcoholism  | 23,631,641           | 4,420,600           | 28,052,241           |
| Drug Rehabilitation   | 6,656,486            | 3,880,672           | 10,537,158           |
| <b>Sub-Total</b>  | <u>55,036,199</u>    | <u>42,902,572</u>   | <u>97,938,771</u>    |
| <b>ENVIRONMENTAL HEALTH SERVICES</b>                                      |                      |                     |                      |
| Lead Poisoning Prevention   | 912,127              | 650,000             | 1,562,127            |
| Radiation Control   | 284,965              | 18,631              | 303,596              |
| Food and Drugs  | 1,317,962            | —                   | 1,317,962            |
| Community Sanitation  | 28,240               | 216,481             | 244,721              |
| Right-to-Know   | 80,987               | —                   | 80,987               |
| <b>Sub-Total</b>  | <u>2,624,281</u>     | <u>885,112</u>      | <u>3,509,393</u>     |
| <b>HEALTH CARE SYSTEMS</b>  |                      |                     |                      |
| Health Statistics and Research  | 1,433,263            | 204,200             | 1,637,463            |
| Determination of Need   | 489,514              | —                   | 489,514              |
| Emergency Medical Services  | 438,689              | 1,012,018           | 1,450,707            |
| Health Care Quality   | 3,707,498            | 864,218             | 4,571,716            |
| <b>Sub-Total</b>  | <u>6,068,964</u>     | <u>2,080,436</u>    | <u>8,149,400</u>     |
| <b>CENTER FOR LABORATORIES &amp; COMMUNICABLE DISEASE CONTROL</b>         |                      |                     |                      |
| State Laboratory Institute  | 5,702,997            | —                   | 5,702,997            |
| Communicable and Venereal Diseases  | 5,300,070            | 184,703             | 5,484,773            |
| Tuberculosis Control  | 2,625,279            | 207,792             | 2,833,071            |
| <b>Sub-Total</b>  | <u>13,628,346</u>    | <u>392,495</u>      | <u>14,020,841</u>    |
| <b>HOSPITALS</b>  |                      |                     |                      |
| Cushing Hospital  | 12,722,845           | —                   | 12,722,845           |
| Lakeville Hospital  | 8,261,153            | —                   | 8,261,153            |
| Lemuel Shattuck Hospital  | 21,146,039           | —                   | 21,146,039           |
| Massachusetts Hospital School   | 7,629,928            | —                   | 7,629,928            |
| Rutland Heights Hospital  | 7,440,592            | —                   | 7,440,592            |
| Tewksbury Hospital  | 20,592,801           | —                   | 20,592,801           |
| Western Massachusetts Hospital  | 6,048,815            | —                   | 6,049,815            |
| <b>Sub-Total</b>  | <u>83,842,173</u>    | <u>—</u>            | <u>83,824,173</u>    |
| <b>TOTAL</b>  | <b>\$167,282,828</b> | <b>\$47,050,646</b> | <b>\$214,333,474</b> |

**EXECUTIVE OFFICE OF HUMAN SERVICES  
MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH  
June 30, 1985**







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## **HIGHLIGHTS**

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**Healthy Start** — to deliver prenatal and postpartum care to uninsured pregnant women.

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**Advocacy Office** — to investigate and resolve complaints of discrimination against Medicare patients by hospitals.

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**Health Resources Office** — to serve as clearinghouse for activities related to Acquired Immune Deficiency Syndrome (AIDS).

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**New AIDS Policies** — for attendance of preschool, developmentally disabled, and school-aged children diagnosed with AIDS; and for food handlers.

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**Great Little Decisions** — public education campaign — recipient of a Community Health Promotion Award for 1986 from Secretary of Health and Human Services.

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**Daminozide** — limits set on amounts of potential carcinogen allowed in heat-processed apple products.

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**Model Statewide Cancer Prevention Program** — to reduce risks of cancer by controlling exposure to environmental and occupational carcinogens.

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**Series of Regional Tours** — conducted by the Commissioner for discussion of public health goals and initiatives.

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## TO THE PEOPLE OF MASSACHUSETTS

In the following pages, you will discover ample evidence that the prevention of disease and disability and the provision of a broad array of services are neither routine activities nor theoretical questions. You will also find that Department of Public Health employees bring to these tasks a sincere commitment, dedication, and talent.

To meet new and recurring problems in public health, the Department led the way in developing innovative programs to protect the health and safety of the people of the Commonwealth. Responding to the report of the Task Force on Prevention of Low Birthweight and Infant Mortality, the Department assumed responsibility for the operation of Healthy Start, making available prenatal, delivery, and postpartum care to uninsured pregnant women.

Through the creation of a Health Resources Office and the appointment of a statewide Acquired Immune Deficiency Syndrome (AIDS) coordinator, the Department was able to promote research and to coordinate and improve services available to AIDS patients. At the same time, the Department developed and implemented policies related specifically to AIDS carriers. Guidelines on AIDS and food handlers to reinforce existing state regulations on food establishments and communicable diseases were developed. Responding to the special concerns of parents and other citizens about the risk of transmission of the AIDS virus among preschool-aged children and the developmentally disabled, as well as the entire school population, the Department approved a policy governing the attendance and care of such children with clinical AIDS or evidence of infection with the AIDS-associated virus.

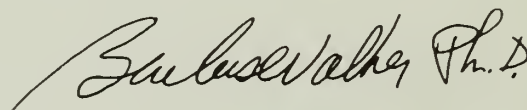
The Department's seven public health hospitals, which have traditionally responded to the changing needs of society by providing care to patients who lacked access to services, continued to develop innovative programs to meet the needs of the underserved. Rutland Heights Hospital, long known for its expertise in the treatment of alcoholism, developed a rotating residency program with the University of Massachusetts Medical School that trained first-year residents in various aspects of alcoholism, including the nature of the disease, community resources and relations, and family structures. The program is the first major medical teaching program that specifically addresses the problem of alcoholism and its prevention.

To reduce deaths from heart disease, cancer, and stroke among Massachusetts residents, the Department's Center for Health Promotion and Environmental Disease Prevention initiated the Great Little Decisions program. Television, radio, and newspapers carried the message of the importance of changing one's lifestyle. Another innovative approach was using beauty salons and barber shops as the sites for blood pressure screenings, thereby increasing the opportunity for easy access to this service.

The potential health risks posed by long-term exposure to chemical residues in our food and water supplies represent a pressing public health issue. When studies pointed to daminozide (marketed under the trade name ALAR) as a carcinogen in laboratory animals, the Department acted quickly to set limits on the amounts of the chemical allowed in heat-processed apple products sold in the Commonwealth. The action made Massachusetts the first state in the nation to adopt such standards.

To improve patients' access to needed health care and services and to protect patients from harm, the Department established an Advocacy Office to provide a mechanism for the review and investigation of patient or provider complaints of alleged discrimination against Medicare patients by hospitals. At the same time, amendments to the long-term care licensure regulations permitted physician assistants and nurse practitioners working in a team with a practicing physician to prescribe medications and to order tests and therapeutics for nursing home and rest home residents. The regulations are intended to reduce overall health care costs for such residents by preventing unnecessary emergency room visits and hospital admissions.

These activities reflect only a small part of the Department's overall programs and services — new and ongoing — in fiscal year 1986 to reduce the risks of disease and disability in the Commonwealth, and to bring services to the most vulnerable sectors of the population. We thank the Governor, the Massachusetts Legislature, and the Executive Office of Human Services for their support of public health activities. We also appreciate the work of many other agencies, organizations, groups, and individuals who have cooperated with the Department in making health care accessible to the people of the Commonwealth.



Bailus Walker, Jr., Ph.D., M.P.H.  
**Commissioner**

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## MEETING PEOPLE'S NEEDS

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*To meet the complex health needs of an expanding population, the Department of Public Health has instituted new, and strengthened existing, programs in the divisions and units that provide a major part of the direct services to the people of the Commonwealth. Emphasis has been on a comprehensive approach to the provision of health care throughout the Commonwealth and the development of innovative programs to reach the underserved.*

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### ALCOHOLISM AND DRUG REHABILITATION

The Divisions of Alcoholism and Drug Rehabilitation, responding to the growing awareness that many of their clients abuse both alcohol and drugs, merged in January 1986, to meet more effectively the varied needs of the residents of Massachusetts. The mission of the merged Divisions is to provide effective prevention, early intervention, and treatment services of high quality. The Divisions initiated several new projects to meet the needs of underserved populations:

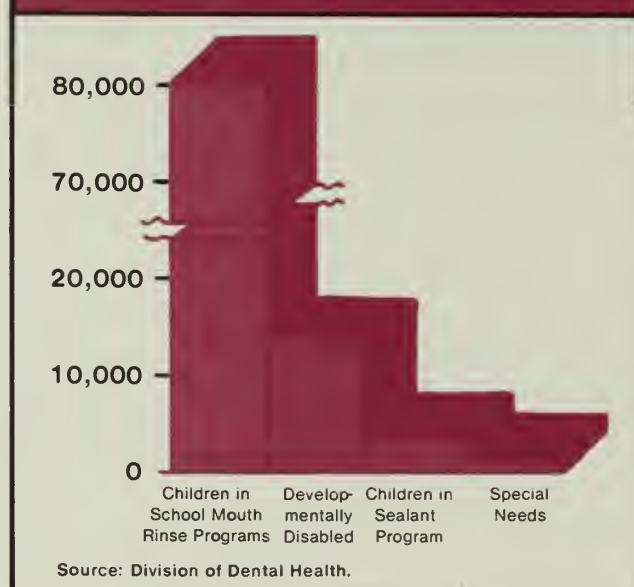
- Established a **Triage and Transportation Project** to facilitate access to services for dually addicted, mentally ill, and homeless clients in the Boston area; and developed a plan with the Executive Office of Human Services and the Department of Mental Health for joint sponsorship of a specialized, intensive detoxification facility to serve such clients.
- Awarded monies to **eight programs** to provide substance abuse counseling and reentry services to substance abusers in correctional institutions.
- Established the **Southeastern Massachusetts Parole Project**, a joint effort with the Office of

Probation and the Department of Correction to initiate and monitor substance abuse treatment for paroled inmates.

- Established the **Minority Alcoholism Task Force and Minority Drug Task Force** to develop regional plans to increase alcohol and drug services for Blacks, Hispanics, Portuguese, and other minorities.
- Expanded funding to increase to seven the number of **youth residential treatment programs** serving young people whose alcohol and/or drug problems have caused personal, school, and family problems. The Department's prevention efforts were carried out in conjunction with the Governor's Alliance Against Drugs and regional primary prevention centers across the state.
- Responded to the increase in **needle-using drug abusers with AIDS** by preparing a comprehensive report, in conjunction with the Department's newly developed Advisory Committee on AIDS and the Needle-Using Drug Abuser. Recommendations for prevention and treatment intervention will be implemented in the next fiscal year.



**Figure 1. Clients Served by Division of Dental Health, 1986.**



## DIVISION OF DENTAL HEALTH

The Department's Division of Dental Health worked to prevent dental disease in the Commonwealth through support of fluoridation of public water supplies, educational campaigns on good health practices, and the provision of dental care for wards of the state (Fig. 1).

• **Prevention of Oral Disease** — The Division initiated a fluoride tablet program for 281 low-income preschool children, including 27 percent of eligible children enrolled in the Headstart Program. This effort complemented ongoing programs that increased to 111 the number of communities with fluoridated public water supplies serving over 3.2 million people in 1986, and to 80,000 the number of children in the school-based Fluoride Mouthrinse Program.

- **The Sealant Program**, a federally funded demonstration project for the prevention of tooth decay among children, treated over 3,000 children from 42 schools. The program received an award from the American Dental Association for its work in reaching children in local health centers, schools, and private dental offices.
- The Division's aggressive action to alert consumers to the adverse oral health effects of **smokeless tobacco** culminated in federal legislation requiring warning labels on all packages and print ads and a ban on electronic advertising in the United States. Congressional staff credited the actions of the Department, which had promulgated the first-in-the-nation regulation requiring a health hazard warning label on containers of snuff, for quick passage of the federal law.



• **Dental Care** — The Division expanded programs to meet the needs of publicly supported groups outside the mainstream of health services:

- The purchase of a **mobile van** brought dental care to 190 children in 10 Department of Youth Services' residential sites.
- The opening of a **new specialty dental clinic** in the Pittsfield area increased the number of clinics to eight and the number of visits of developmentally disabled clients of the Department of Mental Health to over 20,000.
- Responding to the high unmet dental needs among the elderly in nursing homes, the Division provided indepth training to dentists, loaned medical equipment, and covered traveling expenses for participating dentists. The program provided **dental care for 500 elderly** in nursing homes.
- The Division conducted **training programs** for over 1,000 dental personnel on the care and treatment of patients with, or at high risk for, infectious diseases, with special emphasis on Acquired Immune Deficiency Syndrome (AIDS). A pamphlet answering questions that dentists might have about AIDS was written in conjunction with the AIDS Task Force.



# HEALTHY START

A PROGRAM OF CARE FOR PREGNANT WOMEN

## **FAMILY HEALTH SERVICES**

During fiscal year 1986, the Division of Family Health Services made important progress in reducing the gap in infant mortality rates between communities of higher and lower socioeconomic status; in reducing the incidence of malnutrition, especially among children and pregnant women; and in reducing mortality and morbidity among children and adolescents due to accidental injuries.

- **Healthy Start**, one of the first programs in the country to provide prenatal, delivery, and postpartum care for uninsured women, enrolled over 4,500 pregnant women in the program between December 1985 and June 1986.
- The Division also launched a media and education campaign on promoting healthy birth outcomes with the

production of a slide-tape show, **Closing the Gaps**, shown to health providers, community groups, civic groups, legislators, and the public.

- Increased primary care resources to areas of the state with very high rates of infant mortality and limited access to care allowed the Department to expand and improve its network of **Maternal and Infant Care (MIC) Projects** in high-risk communities. The Elm Street Prenatal Clinic was opened at the Providence Hospital in Holyoke to provide comprehensive care to 500 women a year from western Massachusetts.
- Continued state support ensured that the federal Special Supplemental Food Program for Women, Infants, and Children (WIC) would provide nutritious food, nutrition counseling, and health care referrals to 63,000 women, infants, and children up to the age of five who are at



nutritional risk. The pilot **Southeast Asian (SEA) Project** trained 12 Southeast Asians as nutrition assistants to provide direct nutrition education and counseling for the SEA community.

- The newly established **Office of Nutrition** undertook several new initiatives:
  - Reactivation of the **Massachusetts Nutrition Board**, established by legislation in 1974 to advise state agencies on nutrition policies and strategies to improve the nutritional status of residents of the Commonwealth.
  - Release of the first annual report of the **Failure-to-Thrive Program**, which provided diagnosis and multidisciplinary treatment for 600 severely underweight children and their families. Results indicate that 44 percent of the children with at least one follow-up visit showed improved growth; for an additional 44 percent, the growth rate stabilized.
  - A **pilot disease prevention and health promotion program** in two residential sites operated by the Department of Youth Services, to reach an underserved and often-neglected group of adolescents.
- **The High Risk Infant Identification System** was strengthened by new legislation providing a statutory basis for the system, which identifies approximately 7,000 infants each year. The law also improved the payer-of-last-resort program for hospital and transportation costs of financially eligible high-risk infants.
- The Department's **Statewide Comprehensive Injury Prevention Program (SCIPP)**, nationally recognized for its successful programs to reduce childhood injuries and deaths, continued to make progress:
  - In fiscal year 1986, SCIPP awarded grants to eight **local injury prevention programs** targeted toward children.
  - Aiming to reach at least 25 percent of the 1.4 million children and adolescents in the state by 1987 and to reduce injury-related hospitalizations and deaths by 10 percent by 1990, SCIPP developed an innovative training program **SAFESTATE**. Two of the six training modules were prepared during the year and distributed throughout the state.

Massachusetts Department of Public Health

S A F E S T A T E

*Safe*  
H·O·M·E

A tested program for creating safe homes for children by reducing common hazards



- The Division's **Massachusetts Passenger Safety Program (MPSP)** provided technical assistance and support in the successful campaign for passage of seat belt legislation, which became effective on January 1, 1986. MPSP also worked to improve school bus safety.
- **The Services to Handicapped Children's (SHC) Section** served approximately 10,000 children from birth to age 21 through three units: the Early Childhood Development Services, the Community Services, and the Clinical Services Units.
  - The Community Services Unit, which serves children in home health care, pediatric nursing homes, and camp programs, produced a slide show, **There's No Place Like Home**, part of a two-year recruitment project to attract foster and adoptive families and home care health workers to care for medically involved and multiply handicapped children.
  - **The Women's Health Unit** of the Division of Family Health Services focused on services for specific problems like violence and sexual abuse, and services for particularly vulnerable groups of women such as women in prisons and minorities:







**Evelyn Murphy, Secretary, Executive Office of Economic Affairs, Carole Bellamy, President, New York City Council, and Commissioner Bailus Walker, Jr., speaking at "Women in the Workplace" conference.**

- A two-day conference, **Women in the Workplace**, a first in the state, was convened to address occupational health, safety issues, the economic status of women, and related social issues.
- **A Women's Health and Learning Center**, a collaborative effort with the Department of Correction, served over 800 women in prison, many of whom are mothers in need of health promotion counseling.
- **Rape Prevention and Victim Services** provided counseling, advocacy, and education on sexual assault and battering to over 2,000 rape victims and family members in 17 programs across the state, a 20 percent increase over the previous year.

The Division of Family Health Services also increased multidisciplinary services throughout the Commonwealth with the objective of preparing adolescents for a healthy, productive adulthood. Health care and supportive and educational services were made available to adolescents, including pregnant and parenting teens.

## **HEALTH RESOURCES OFFICE**

The Health Resources Office was established in August 1985 to improve the delivery of health care services through effective administration and management of statewide resources. One of the first tasks of the Office was the coordination of activities to curtail the spread of AIDS and to provide services for people with the disease. Working with the Governor's Task Force on AIDS, the Health Resources Office carried out an intensive educational program on AIDS for the general public, for persons at high risk, and health organizations. The Office also developed a plan for the allocation of resources to support expansion of home and hospice care, specialized shelters for the homeless and intravenous drug users. In addition, the Department has supported research on the causes, care and treatment, and prevention of AIDS, and programs to follow up blood donors found positive for the AIDS-associated virus.

# CONTROLLING COMMUNICABLE DISEASES

*Health surveillance and disease control activities to protect the people of the Commonwealth through testing, vaccination, treatment, analysis of disease trends, and assessments of health risks to the population are the responsibilities of the Center for Laboratories and Communicable Disease Control. Within the Center are the State Laboratory Institute, and the Divisions of Communicable Diseases and Tuberculosis Control.*

## CENTER FOR LABORATORIES AND COMMUNICABLE DISEASE CONTROL

The Center for Laboratories and Communicable Disease Control completed its first full year of operations as the bureau into which all state public health infectious disease programs had been merged. The beneficial effects of the Center are reflected in greatly improved health services in the Commonwealth (Table 1).

- To reduce morbidity and mortality among newborns, children, and adolescents, the Center implemented several **new programs**, while strengthening its traditional **services to children**:

- **A new vaccine, Haemophilus influenzae type b (Hib)**, was provided free of charge to public clinics and neighborhood health centers throughout the state for use in children between two and three years of age to prevent the most common cause of bacterial meningitis in children.
- **The college immunization law**, the first state law in the nation to require college students to be immunized against measles, mumps, rubella, tetanus, and diphtheria, was implemented. Implementation of the law will help prevent future outbreaks of these five diseases among college students in Massachusetts.

Table 1.

### Center for Laboratories & Communicable Disease Control

Program Services July 1, 1985 - June 30, 1986.

| Program (unit of measure)                       | Number           |
|---|------------------|
| <b>Biologics (immunizing doses)</b>             |                  |
| Serums  | 113,146          |
| Vaccines  | 1,893,340        |
| <b>Total number of doses</b>                    | <b>2,011,486</b> |
| <b>Newborn Screening (children tested)</b>      |                  |
| Massachusetts                                   | 84,846           |
| Other New England states                        | 91,406           |
| <b>Total number of children screened</b>        | <b>176,252</b>   |
| <b>Microbiology (samples tested)</b>            |                  |
| Bacteriology                                    | 107,864          |
| Food bacteriology                               | 7,879            |
| Mycobacteriology                                | 30,450           |
| Virology & Rabies                               | 13,582           |
| Serology  | 94,682           |
| Clinical investigations                         | 5,625            |
| <b>Total number of samples</b>                  | <b>260,082</b>   |
| <b>Analytical Chemistry (samples tested)</b>    |                  |
| Food safety                                     | 1,671            |
| Environmental/human exposure                    | 2,838            |
| Illicit drugs                                   | 33,358           |
| <b>Total samples</b>                            | <b>37,867</b>    |
| <b>Clinic services (patient visits)</b>         |                  |
| Sexually transmitted diseases                   | 33,692           |
| Tuberculosis                                    | 25,210           |
| <b>Total patient visits</b>                     | <b>58,902</b>    |
| <b>Microbiological Culture Kits Distributed</b> | <b>133,743</b>   |



**Table 2.**  
**New England Regional Screening Program**  
**July 1, 1985 - June 30, 1986.**

| Disorders                  | Massachusetts     |                | Other States*     |                | Program Total     |                |
|----------------------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|
|                            | Newborns Screened | Cases Detected | Newborns Screened | Cases Detected | Newborns Screened | Cases Detected |
| Hypothyroidism             | 84,846            | 11             | 91,406            | 26             | 176,252           | 37             |
| Phenylketonuria (PKU)      | 84,846            | 4              | 45,951            | 4              | 130,797           | 8              |
| Galactosemia               | 84,846            | 1              | 45,951            | 2              | 130,797           | 3              |
| Homocystinuria             | 84,846            | 0              | 45,951            | 0              | 130,797           | 0              |
| Maple Syrup Urine Disease  | 84,846            | 1              | 45,951            | 0              | 130,797           | 1              |
| Congenital Toxoplasmosis** | 25,798            | 3              | —                 | —              | 25,798            | 3              |
| <b>Total</b>               |                   | <b>20</b>      |                   | <b>32</b>      |                   | <b>52</b>      |

\*Connecticut, Maine, New Hampshire, and Rhode Island

\*\*Screening started January 1986.

- The Newborn Screening Program added **congenital toxoplasmosis** to the list of diseases screened in children, the first infectious disease to be screened by any state newborn screening program. Early treatment of the disease may prevent development of central nervous system and eye disorders (Table 2).
- A multihospital randomized clinical trial of an **intravenous cytomegalovirus immune globulin (CMV-IV)** was completed, and showed that the product was effective in decreasing the incidence of severe CMV disease, which often occurs in young people who receive kidney transplants.
- A pilot program was implemented to identify pregnant refugee women who are **carriers of hepatitis B virus** and to immunize their newborns at birth.

The Center for Laboratories and Communicable Disease Control redirected resources as required to **ensure quality health services** to all residents:

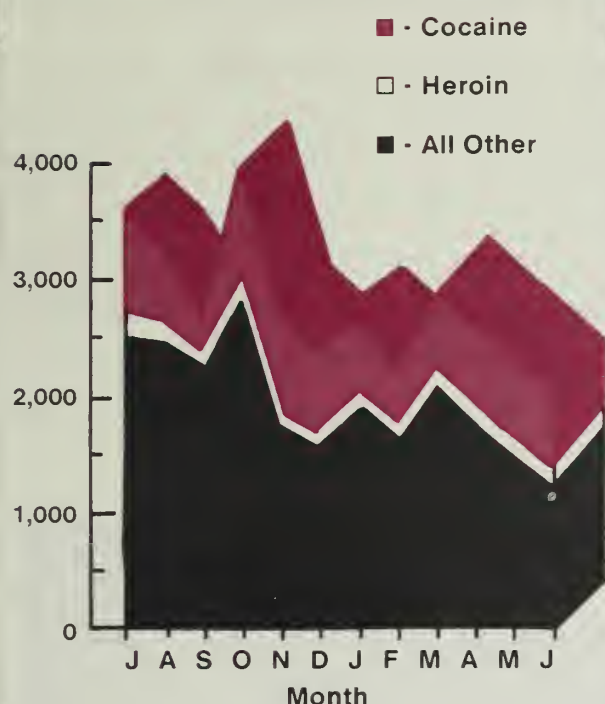
- The Center developed the Department's **Refugee Health Plan**, which provides training, assistance,

and direct services to refugees and health care providers for the thousands of refugees in the state.

- The allocation of increased resources to clinics with high rates of service use improved the prevention and control of **sexually transmitted diseases (STD)**. The Division of Communicable Disease Control opened its first STD clinic in Springfield, to be used as a model for the provision of community-based STD services.
- **The Tuberculosis Control Program** directed special attention to the problem of tuberculosis in homeless groups and in refugees both within and outside its network of inpatient and ambulatory services in community hospitals throughout the state. The program also developed innovative outreach and school-based programs in an attempt to reverse the upturn of the disease in the Commonwealth.

The Center worked with the Division of Drug Rehabilitation to strengthen efforts **to prevent drug abuse** in Massachusetts:

**Figure 2. Drug Cases Analyzed  
Fiscal Year 1986.**



Source: Center for Laboratories and Communicable Disease Control.



**Dr. Ken Girard and Tak Wah Chin in Serology Laboratory.**

- Developed an analytical and epidemiologic research capability to combat the problem of drug abuse.
- Conducted research projects to assess the effects of drug abuse on mothers and their children.
- Developed high quality, rapid drug testing services for law enforcement agencies to assist them in stemming the supply of drugs in the state (Fig. 2).
- An intradepartmental **Working Group on Foodborne Illness**, formed in October 1985, comprises epidemiologists, laboratory scientists, and food inspectors who coordinate the investigation and prevention of foodborne illness, and provide assistance to local boards of health. Innovative components of the program to ensure its success included:
  - Transfer of the **Food Bacteriology Laboratory** to the Diagnostic Laboratory Division, resulting in improved coordination and sophistication of analysis of food samples and clinical specimens.
  - Assignment by the Centers for Disease Control (CDC) of an **Epidemiologic Intelligence Service physician** to the Department's Communicable Disease Program.

- Recruitment of a physician, a veterinarian, and epidemiologists to establish a specialized **surveillance and epidemiology response team**.

To assist the Department in making decisions affecting the health of the residents of the Commonwealth, the Center for Laboratories and Communicable Disease Control has begun to build a sophisticated laboratory capable of conducting biochemical epidemiologic studies, assaying foods for chemical contaminants, and developing data bases on residues:

- Introduction of a gas chromatography/mass spectrometry analysis to support residue and biochemical analytical needs.
- Participation in the federal **FOODCONTAM pesticide analytical program**, a cooperative effort under which states and the Food and Drug Administration share analytical test results for food residues. Massachusetts is one of only four states currently participating in the program.



Figure 3. Cumulative AIDS Cases in Massachusetts, 1985, 1986.



Source: Center for Laboratories and Communicable Disease Control.

The Center for Laboratories and Communicable Disease Control strengthened its efforts statewide to provide surveillance, education, and testing services for persons with Acquired Immune Deficiency Syndrome (AIDS) (Fig. 3).

- The Center collaborated with staff from the Boston Department of Health and Hospitals on **AIDS research and public education**. Health education in risk groups such as male homosexuals showed favorable results. At the same time, the emergence of cases of parenteral drug users received special attention.

- The establishment of **alternative testing sites** for

persons who would have become high-risk donors has made the blood supply in Massachusetts one of the safest in the nation. Sophisticated reference testing at the Department's laboratories has reduced the number of false positive test results.

- Staff made important contributions to the public's understanding of how to respond to people with AIDS by defining the scientific basis for **school and occupational management** of infected individuals. The school attendance policy developed for the Commonwealth preceded federal initiatives and became a model for many other state and professional guidelines.

# IMPROVING THE HEALTH OF THE COMMUNITY

*To improve the health of the Commonwealth's approximately six million citizens, the Department continued to provide direct services through contracts, organized and implemented more special programs, and expanded patient care and ambulatory units in the seven Public Health Hospitals. At the same time, the Office of Local Health Services and Regional Operations strengthened its ties with community providers, local boards of health, and other organizations.*

## NEW TRENDS IN PATIENT CARE

The Department of Public Health's seven hospitals represent more than **350 years of service to the people of the Commonwealth**. Responding to the changing needs of an expanding population and the increasing

demands for health services, the Department established a Bureau of Hospital Management under the direction of an Assistant Commissioner to coordinate services and programs. During fiscal year 1986, the hospitals developed more preventive, therapeutic, and rehabilitative services not always available through the private sector (Table 3).

**Table 3.**  
**Public Health Hospitals**  
**Annual Census Summary — July 1, 1985 - June 30, 1986.**

| Hospitals                         | Admissions   | Discharges   | Days           | Stay*    | Census   | Visits        |
|-----------------------------------|--------------|--------------|----------------|----------|----------|---------------|
| Cushing                           | 51           | 69           | 125,235        | 2,261.0  | 347.0    |               |
| Lakeville                         | 412          | 398          | 30,170         | 73.4     | 81.9     | 13,109        |
| Lemuel Shattuck                   |              |              |                |          |          |               |
| Main                              | 1,560        | 1,505        | 42,941         | 21.9     | 117.6    | 3,849         |
| Medical Geriatric                 | 63           | 58           | 25,657         | 1,313.6  | 37.6     | 7             |
| Bay Cove (Mental Health Patients) | 547          | 546          | 22,588         | 37.0     | 63.0     | 56            |
| Mass. Hospital School             | 126          | 127          | 27,454         | 139.7    | 124.5**  | 1,918         |
| Rutland Heights                   |              |              |                |          |          |               |
| Chronic                           | 419          | 415          | 33,092         | 101.0    | 91.0     | —             |
| DUI*                              | 2,320        | 2,301        | 29,603         | —        | 81.0     | —             |
| Tewksbury                         |              |              |                |          |          |               |
| Main                              | 170          | 186          | 278,740        | 1,499.0  | 734.0    | —             |
| Nichols (Homeless Men)            | 274          | 264          | 25,967         | 98.0     | 152.0    | —             |
| Western Massachusetts             | 221          | 107          | 29,292         | 94.3     | 100.4    | 20,992        |
| <b>TOTAL</b>                      | <b>6,163</b> | <b>5,976</b> | <b>670,739</b> | <b>—</b> | <b>—</b> | <b>39,931</b> |

\* Stay represents number of days.

\*\* Average daily census at the Mass. Hospital School has been adjusted to reflect enrollment days.

\* Driving Under the Influence Program.

Source: Bureau of Hospital Management.





Patient in Pet Therapy Program at Cushing Hospital.

- **Cushing Hospital**, a chronic disease hospital for the elderly, opened a specialized treatment unit for patients with Alzheimer's disease that provides short-term (respite), intermediate, and long-term care. Cushing's innovative therapeutic modalities have received widespread recognition. Pet therapy has shown how the introduction of animals can have a positive effect on the quality of life of institutionalized older patients; the plant therapy program allows patients to care for small gardens, terrariums, and potted plants.

- **Lakeville Hospital**, which cares for both children and adults with chronic illnesses and in need of rehabilitative services, emphasized returning patients to their communities, and provided intensive therapy. Responding to the needs of the community, Lakeville opened two new outpatient clinics, a Birth Defects Clinic and an Osteoporosis Clinic.

- **Lemuel Shattuck Hospital** shifted its emphasis from acute care to the provision of multiple levels of care to different groups of patients for whom adequate health care is not accessible or available in the private sector. A new palliative care service admitted terminal cancer patients who cannot be adequately cared for at home. The

Shattuck also provided care for terminally ill patients with AIDS from the Departments of Correction and Mental Health. The hospital received a grant from the Robert Wood Johnson Foundation to provide medical care for the homeless.

- **The Massachusetts Hospital School** implemented a number of initiatives designed to encourage independence among its physically handicapped but intellectually able children. The Community Experience Program, now a part of the hospital's comprehensive curriculum, prepared individualized plans for each student and organized 36 trips into the community. The Hospital School's project Enabling Youth for Employment (Project EYE) provided a meaningful work experience to introduce students to the work world, as well as the securing of permanent positions for them upon graduation.

- **Rutland Heights Hospital** coordinated with the University of Massachusetts School of Medicine a "Family Addiction Residency Rotation Program" for first-year residents enrolled in the School's Community and Family Health Program, the first major medical teaching program that specifically addresses alcohol use and the prevention of alcoholism in the Commonwealth. The hospital also



Patient on Lesser Care Unit, Tewksbury Hospital.

developed plans for a 12-bed unit devoted to the treatment of Vietnam veterans suffering from the effects of Post Traumatic Stress Disorder.

- **Tewksbury Hospital**, the oldest chronic disease hospital in the state, maintained its programs for the homeless and instituted several innovative programs. Thirty-two patients on the new Lesser Care Unit received a wide range of integrated rehabilitative services and activities to help them reach and maintain a greater level of independence. An inservice training program was organized for students from a local high school to introduce them to physical therapy.

- **Western Massachusetts Hospital** filled gaps in health care services for a large scattered community. Responding to community needs, the hospital developed a specialty unit for patients with chronic progressive or unremitting neurologic disease. As a result of a proposal submitted by the hospital's employee child care committee, Western Massachusetts Hospital was selected as one of five sites by the state's Division of Capital Planning and Operation to receive funding for the development of an Employee Child Care Center.

## LOCAL AND REGIONAL HEALTH SERVICES

**The Office of Local Health Services and Regional Operations**, through its four Regional Health Offices, coordinated the Department's local health activities throughout the Commonwealth. To keep local boards of health and other health agencies informed of the scientific and technical aspects of public health, the Office undertook several new initiatives:

- Sponsored **40 training sessions** on such topics as the legal responsibilities of members of local boards of health, AIDS, school health, community nursing, environmental health, and control of tuberculosis, a disease that resurfaced as a growing public health problem.
- Conducted a three-day **training program on housing** as a public health issue for 200 local health officers, in conjunction with the Division of Community Sanitation.
- Compiled a **listing of the Department's community programs** by individual community to make available a valuable resource for staff, legislators, and community agencies.
- Participated with the Office of Public Information and Health Education in regional **Press Ahead Campaigns** to strengthen relations between the Department and health agencies and programs throughout the state.

The four Regional Health Offices developed or coordinated a variety of programs for local boards of health and other health agencies. Among the highlights of the activities of the Regional Health Offices during the fiscal year were:

- Establishing an Advisory Committee to provide a working forum for staff and members of local boards of health, and assisting 12 communities to explore the benefits of a regional health services program (**Central Regional Health Office**).
- Assisting the family of a three-year-old child in need of a liver transplant to locate an organ and to have the operation performed regardless of the family's ability to pay (**Northeast Regional Health Office**).
- Increasing outreach efforts to strengthen liaison between the regional health office and various community groups, among them, the City of Brockton's Task Force on Health/Human Services (**Southeast Regional Health Office**).
- Conducting for staff in the regional health office an employee health screening program that focused on high blood pressure, elevated cholesterol, nutrition, and other lifestyle risk factors (**Western Regional Health Office**).



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# ENHANCING THE HEALTH OF THE PEOPLE

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*The prevention of chronic disease and dysfunction among the people of the Commonwealth remains the keystone of all activities of the Department of Public Health. A multifaceted approach to reducing the incidence of heart disease, cancer, and stroke — and basic to all preventive efforts — emphasizes changing people's lifestyles. The Department has also intensified its efforts to reduce the risks of physical, chemical, and biological elements in the environment. These activities are carried out by the Center for Health Promotion and Environmental Disease Prevention and by the Bureau of Environmental Health Services.*

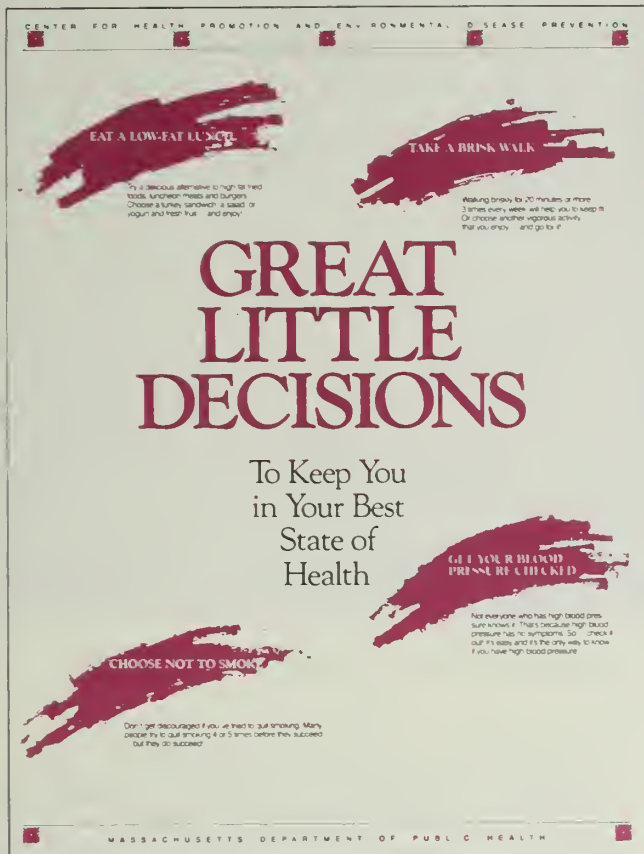
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## PROMOTING HEALTH AND PREVENTING DISEASE

The **Center for Health Promotion and Environmental Disease Prevention**, through its two divisions, Health Promotion Sciences and Environmental Epidemiology and Toxicology, supported activities to encourage the adoption of healthy lifestyles among Massachusetts residents, and to identify the determinants of disease to prevent further incidence of diseases linked to toxic elements in the environment.

- **The Division of Health Promotion Sciences** embarked on several new and innovative programs:
  - The Division, in collaboration with the Office of Public Information and Health Education, developed the **Great Little Decisions** public education campaign, which emphasized the importance of making lifestyle changes.

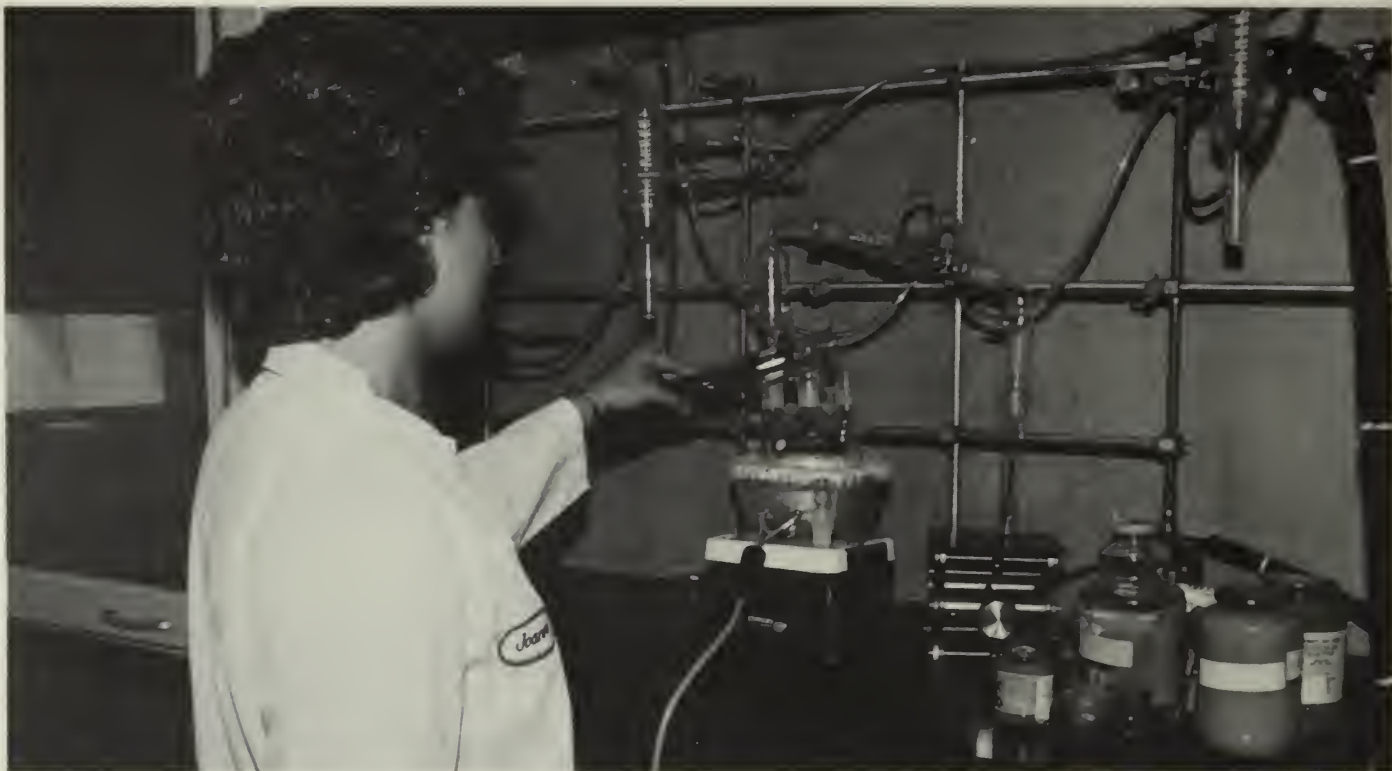
- The Division provided funding for eight agencies to implement **lifestyle intervention programs** in their communities, targeted to reduce the prevalence of the risk factors of smoking, excess dietary fat, and physical inactivity.
- Six regionally based health promotion coordinators provided consultative services for developing **worksite health promotion programs**, which focus on smoking cessation, reducing excess dietary fat and cholesterol, controlling high blood pressure, and encouraging exercise programs.
- **Be in Style — Trim Your Blood Pressure** was the theme for High Blood Pressure Control Month, during which time the Division conducted blood pressure screenings in barber shops and beauty salons throughout the state, to bring the message to the general population in a setting other than a routine health care delivery environment.



Lions Club Eye Mobile screening for diabetic retinopathy.

- The Department launched a new program to prevent blindness due to **diabetic retinopathy**. Screenings took place in the Lions Club Eye Mobile, and results were forwarded to program staff in the Division for follow-up. Sixty percent of new cases of blindness should be prevented as a result of early detection, referral, and treatment.
- In collaboration with others in the Department, the Division developed the **1986 Massachusetts Health Interview Survey** to gather data on the prevalence of the major risk factors for the leading causes of death and on the prevalence of environmental and occupational risk factors. Data will be compared with data from the 1980 state survey and from national surveys.
- **The Division of Environmental Epidemiology and Toxicology**, which also includes a Risk Assessment Unit, developed new services to help identify communities for which resources can be targeted to prevent disease, and to provide technical assistance to other agencies and groups. The Division also drafted what will be the first state policy for the identification, classification, and regulation of potential human carcinogens. Several studies were completed or are underway to determine risk factors in critical environmentally related diseases. Since it is not always possible to monitor exposure directly, it was often necessary to infer exposure from studies of health effects:
- **Cancer mortality and incidence rates** in towns on the Upper Cape and in Worcester were investigated. Lung cancer rates were elevated in both areas, and follow-up studies were planned. In addition, cancer mortality and incidence statistics in 13 other towns were reviewed.
- The Division received funding from the National Cancer Institute for its **Model Statewide Cancer Prevention Program**, which seeks to reduce risks of cancer by controlling exposure to environmental carcinogens.
- Division staff provided guidance on the health risks of 14 pesticides being considered for registration by the Massachusetts Pesticide Board Subcommittee, and developed drinking water **guidelines for eight pesticides**.
- The Division completed a comprehensive toxicologic assessment of the health effects of **sulfiting agents in foods**, at the request of the Division of Food and Drugs.
- The Center for Health Education and Environmental Information in New Bedford was opened in October 1985, to serve as a **model community outreach program** for environmental health issues. Informational services, environmental education programs for children in kindergarten through grade 12, and an Environmental InfoXchange in New Bedford area libraries were developed.
- To aid in assessing health risks to the residents of the Commonwealth, the Division set up a number of quantitative risk assessment computer programs.





Testing heat-processed apple products for levels of daminozide at the Food and Drugs Laboratory.

## ENSURING A HEALTHY ENVIRONMENT

The Bureau of Environmental Health Services, through its four divisions, identified and evaluated environmental hazards to human health and developed measures to reduce such risks.

- **The Division of Food and Drugs** is the principal consumer protection unit in the state in the areas of the safety of food, drugs, and other consumer products. During fiscal year 1986, the Division instituted new projects to ensure a safe and wholesome food supply for Massachusetts consumers:

- To eliminate potentially harmful chemical residues from the state's food supply, the Division of Food and Drugs recommended to the Public Health Council strict limits on the amount of **daminozide**, a growth regulator applied primarily to apples, allowed in heat-processed apple sauce and apple juice. Daminozide has been identified as a carcinogen in animal studies. The Division's recommendation was adopted by the Council.
- The Division recommended to the Public Health Council the lowering of the amounts of **ethylene dibromide (EDB)** and **polychlorinated biphenyls**, both carcinogenic, in food, and continued testing and monitoring food products for these contaminants.
- The Division's Generic Drug Program added 42 drugs to the Massachusetts List of Interchangeable Drugs, and mailed updated lists to 7,000 pharmacies across the state. Amendments to the **Massachusetts Generic Drug Law** require the Department to adopt a new one-signature-line format

for prescription blanks, and require pharmacists to dispense a lower cost generic drug for a brand-name product. It was estimated that the Massachusetts Medicaid Program would realize a savings of over \$4 million through the use of generic drugs in fiscal year 1986.

**The Childhood Lead Poisoning Prevention Program (CLPPP)** increased its efforts to reduce the incidence of lead poisoning in children through public education and the removal of residential lead hazards before children are poisoned:

- Over 166,900 children under the age of six were screened for **lead poisoning**, the largest annual total to date, and 1,011 children, a decrease of 34 percent, were identified as lead poisoned.
- By the end of the fiscal year, the Department began implementation of the new **lead poisoning guidelines** from the Centers for Disease Control, which protect children from lead poisoning at lower levels than the ones previously considered "safe."
- To broaden the understanding of the hazards posed by aging housing with lead-based paint in the Commonwealth, CLPPP arranged **six conferences** for the real estate, insurance, banking, and housing rehabilitation industries.
- **The Case Management System**, which enrolls all children with elevated blood lead levels and follows their progress until they are discharged, became automated by the end of the fiscal year. Automation will allow more regular reports, and provide primary care providers with updated information on the status of their clients.

**Table 4.**  
**Summary of Activities**  
**Environmental Hygiene**  
**July 1, 1985 - June 30, 1986.**

| Facilities              | Activities  |
|-------------------------|---|
| Housing                 | 448 Initial inspections<br>103 Reinspections<br>8 Assumptions of jurisdiction                   |
| Correctional Facilities | 31 State facility inspections<br>28 County facility inspections<br>35 DYS facility inspections* |
| Office for Children     | 26 Inspections for licensure of group day-care facilities                                       |
| Lock-ups                | 53 Inspections  |
| Recreational Camps      | 37 Inspections  |
| Fluoridation Sites      | 302 Visits  |
| Farm Labor Camps        | 62 Camp certifications  |
| Microwave Ovens         | 63 Inspections  |

\*DYS - Division of Youth Services.



**Quality Assurance Program at Radiation Counting Laboratory.**

**The Division of Community Sanitation**, through its three units — Environmental Hygiene, Urea Formaldehyde Foam Insulation (UFFI), and Right-to-Know — carried out activities to protect the health of the residents of the Commonwealth from environmental hazards (Table 4).

- To provide housing code inspectors with an understanding of, and rationale for, provisions of the state housing code, the Division organized a major, **three-day training program** attended by over 200 inspectors.
- Staff worked with officials of the Town of Easthampton in the formation of a board of health separate from the Board of Selectmen. Such action will ensure that greater attention is given to health activities.
- By the end of the fiscal year, the Division had begun plans for the implementation of the **new UFFI Law**, the result of a consensus reached among the Department of Public Health, homeowners with UFFI in their homes, industry, and other concerned citizens. The new law established a UFFI Trust Fund to pay for air testing in residential dwellings insulated with UFFI, and to provide funds for removal of UFFI from dwellings that qualify for the removal program.
- Under the provisions of the **Massachusetts Right-to-Know Law**, the Department amended the Massachusetts Substance List to include 48 additional substances and two generic substances, asbestos and chromium.

**The Radiation Control Program**, which is responsible for protecting the public from both ionizing and nonionizing sources of radiation, developed new programs to protect the health of the population:

- Staff conducted a special survey of all **mammography units** throughout the Commonwealth and collected data on dosages, frequency of use, number of patients examined, image quality, and range of exposures.
- Staff established a **quality assurance program** at the Department's Radiation Counting Laboratory, capable of analyzing environmental samples. The laboratory has participated in, and has been approved for, the U.S. Environmental Protection Agency's laboratory certification program.
- The Radiation Control Program conducted **extensive environmental monitoring** across the state during the spring of 1986 in response to the accident at the nuclear power plant at Chernobyl, in the Soviet Union. Continuous monitoring of the ambient air, water supplies, some food products, and dairy farms gave assurances that the Chernobyl accident did not result in detectable increases in radiation in Massachusetts.



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## **PROVIDING PATIENT CARE SERVICES**

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*The Bureau of Health Care Systems is responsible for ensuring high-quality health care at reasonable cost to the people of the Commonwealth. It also has responsibility for preventing unnecessary expansion or renovation of health care facilities that add to the cost of health care.*

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### **ORGAN TRANSPLANTATION SERVICES**


The Division of Organ Transplantation Services implemented the Organ Transplant Fund during fiscal year 1986. Guidelines and application procedures were developed and the first transplant recipients enrolled. Contributions to the fund come from the state's taxpayers who check the appropriate box on their state income tax returns. The fund, the first in the nation, assists Massachusetts residents with the costs of medically approved organ transplants. Guidelines for the fund seek to assist as many patients as possible with the costs of a transplant not covered by insurance. The fund will continue to enroll as recipients, through expanded outreach programs, persons who received transplants before 1985 but who are still on drug therapy.

### **EMERGENCY MEDICAL SERVICES**

The Office of Emergency Medical Services (OEMS) expanded its efforts to reduce deaths from cardiac disease, traumatic injuries, and other medical emergencies through the introduction of new approaches:

- OEMS conducted a special public education campaign — **Killing Time Waiting to Feel Better Could Kill You** — to alert people to the importance of paying attention to the early warning signs of a heart attack.
- OEMS maintained support of the **Cardiopulmonary Resuscitation (CPR) Registry**, an innovative approach to providing public information on CPR which lists all CPR training institutions in the state in a continually updated resource directory.
- In fiscal year 1986, the Office of Emergency Medical Services began upgrading all basic emergency medical technicians to allow them to use the **Pneumatic Anti-Shock Garment** under medical direction, thus improving their ability to stabilize some of the most dangerous injuries in the field and to provide special care for victims in shock.

# KILLING TIME WAITING TO FEEL BETTER COULD KILL YOU.



Over 8,000 Massachusetts residents will die of a heart attack this year. Two-thirds die before they reach the hospital—many waiting up to three hours before calling for an ambulance.

Don't be one of them. Don't wait to call for help. Know the early warning signs of a heart attack:

- pain, tightness, pressure or discomfort in your chest, arm, abdomen, neck or jaw
- nausea, especially if accompanied by sweating
- a feeling of weakness or dizziness
- difficulty breathing

If you suffer any of these symptoms or are with someone suffering from them, get help.

Fast. Use your telephone. Call your local emergency ambulance service 24-hours a day. Their number is listed inside the front cover of your phone book. Look it up, write it down, carry it with you.

Because killing time waiting to feel better could kill you.

## MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

Office of Emergency Medical Services, Regional EMS councils and your local Emergency Medical Service provider.  
Commonwealth of Massachusetts – Michael S. Dukakis, Governor.

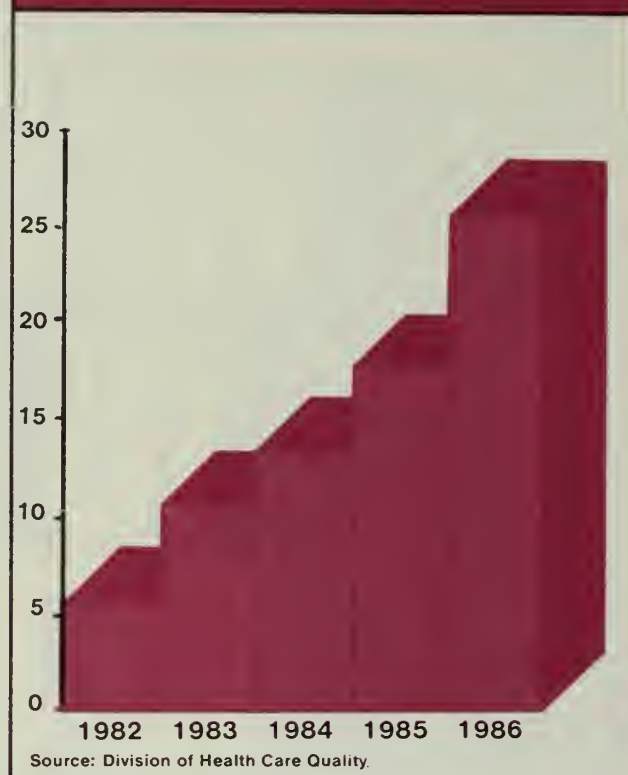


## HEALTH CARE QUALITY

In fiscal year 1986, the **Division of Health Care Quality** developed programs to guarantee access to care for patients and access to the health care market for providers. The Division played a major role in the implementation of the Prospective Payment System for Medicare, which became effective in Massachusetts in October 1985, and under which hospitals are reimbursed for each patient on a per case basis according to Diagnostically Related Groups (DRGs).

- In response to the new reimbursement program, the Division of Health Care Quality established within its Patient Protection Unit an **Advocacy Office** to receive, review, investigate, and resolve complaints of alleged discrimination against Medicare patients by hospitals. Between January and June 30, 1986, the Advocacy Office received more than 130 complaints ranging from denied or delayed hospital admissions to premature discharges.
- The Division received funds to test a new prospective nursing home reimbursement system that provides nursing homes with incentives to care for patients traditionally denied access because of their need for **more intensive nursing care**.
- The Division brought **action to place in receivership** three rest homes, one chronic disease hospital, and three intermediate care facilities for the retarded, thereby protecting over 425 patients from substandard providers.
- The Division developed major reviews of the **suitability of nursing home owners and operators** to screen out owners who have poor records of operating nursing homes, or who are financially unable to provide adequate care.
- The Division also carried out research studies, evaluations of innovative projects, and **developed or revised regulations** to identify and respond to changes in the health care delivery system. These included recommendations to develop a new set of regulations for mentally ill patients in rest homes, and convening a task force to develop guidelines for responding to the special needs of patients with Alzheimer's disease in long-term care facilities.
- The Division promulgated **Patient Abuse Regulations** to protect patients in long-term care facilities from abuse, mistreatment, and neglect. The Division investigated approximately 305 separate complaints, an increase of 45 percent over the previous year (Fig. 4), the result of a stepped-up campaign of public information and the toll-free patient abuse hot line.

Figure 4. Monthly Complaints Received by the Division of Health Care Quality, 1982 - 1986.

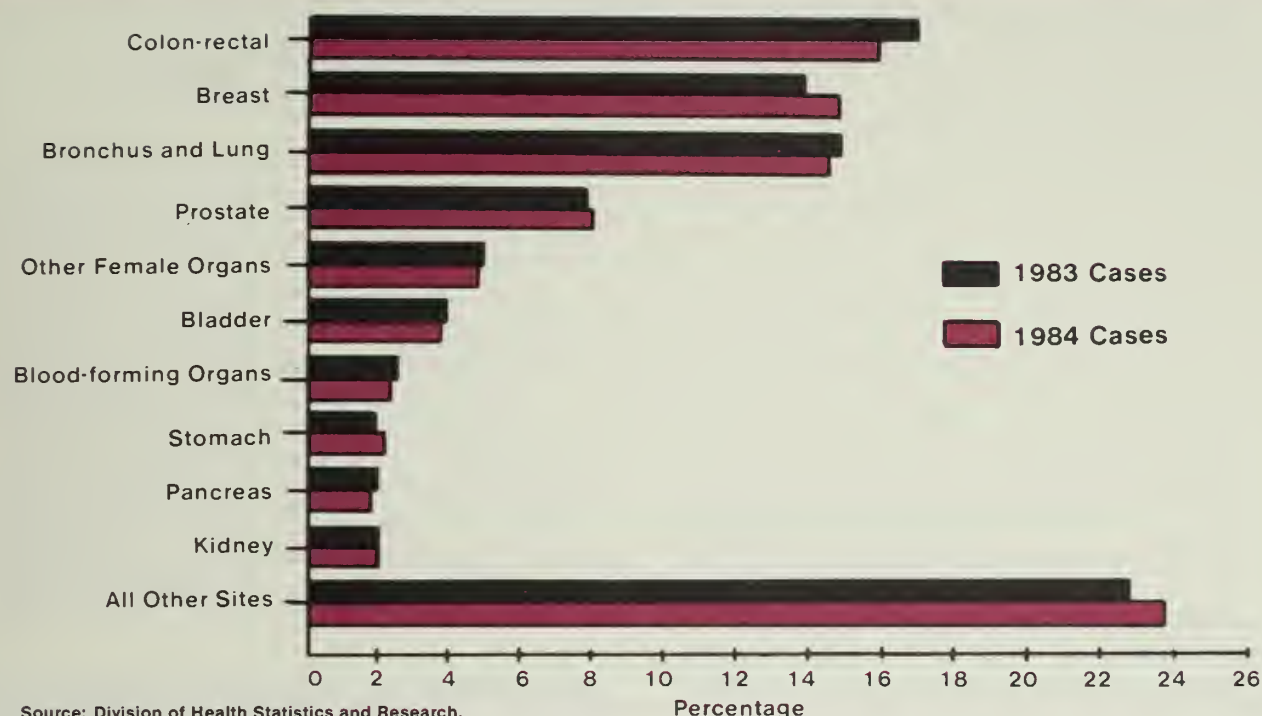


## CONTROLLING HEALTH CARE COSTS

The main objectives of the Department's **Determination of Need (DON) Program** included reduction of overall health care costs by preventing duplication of services, promotion of health care needs of the people, and promotion of equitable geographic and socioeconomic access to health care.

- In fiscal year 1986, DON staff greatly reduced the approval rate (the ratio of total maximum capital expenditures requested as compared to the amount approved) from 89 percent in 1982 to 52 percent in 1986.
- Staff made substantial progress in improving the efficiency of project review. In fiscal year 1986, 86 hospital applications were reviewed as compared to 60 in the previous year.
- Staff also developed guidelines to expedite project reviews and streamline the process for end stage renal disease, long-term care standards, continuing care retirement communities, Alzheimer's disease, radiation therapy, and inpatient psychiatric care. The latter guidelines seek to ensure the development of appropriate placement settings for children and adolescents who require inpatient psychiatric care.

Figure 5. Massachusetts Cancer Incidence by Site, 1983, 1984.



## HEALTH STATISTICS AND RESEARCH

The Division of Health Statistics and Research provided coordination of health data among agencies that collect and use such data, and statistical standards and technical assistance to users of health and demographic data. Statistics compiled by the four units of the Division were an important guide to the Department in setting priorities, in formulating and implementing health policy decisions, and in evaluating program results. Major activities of the Division in fiscal year 1986 included the following:

- As part of a cooperative agreement with the National Institute of Safety and Health to develop an **analytical surveillance system** of the relation of occupation to mortality and birth outcomes, the Registry of Vital Records and Statistics coded all deaths and incidences of cancer and a sample of birth records for occupation and industry.
- To improve the analytical surveillance system of the relation of occupation to mortality and birth outcomes, the **Research and Epidemiology Unit** developed specialized software. Cancer incidence and death certificate data were used to assess the occupational patterns of persons diagnosed with mesothelioma,

and to study the pattern of cancer among welders and workers in the health care industry.

- The **Massachusetts Cancer Registry** completed the processing of 1984 cancer incidence data (Fig. 5). Staff participated with the Center for Health Promotion and Environmental Disease Prevention in several special community studies, and assisted outside researchers in assessing the cause of laryngeal, ovarian, rectal and oral cancer. The identification of Kaposi's sarcoma in young men due to the spread of AIDS showed a dramatic increase of over 50 percent in 1984.
- The Division implemented direct entry of birth information from hospitals to the computer files of the Registry of Vital Records and Statistics, the **first such program in the nation**. Operating on a pilot basis at three large maternity centers in the Greater Boston Area, the program provided an efficient, computerized collection of data and eliminated data entry and transcription errors inherent in manual methods.
- As part of its public information activities, the Division expanded its collaboration with outside agencies, including an innovative study with the Harvard University School of Medicine on the relation of circadian rhythms to cardiac deaths.



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## **CENTRAL SUPPORT SERVICES**

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*The Department of Public Health staffs  
other divisions and offices whose main tasks  
are support and coordination of services to  
assist program units and divisions in  
carrying out their assigned responsibilities.*

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### **LEGAL AND LEGISLATIVE SERVICES**

**The Office of the General Counsel**, which is the legal liaison between the Department and the public, provided other divisions with the legal knowledge and support required in promulgating regulations to protect the health and safety of the people of the Commonwealth. New regulations on pediatric nursing homes, UFFI Trust Fund, patient abuse and neglect, and the amount of daminozide allowed in foods, as well as a complete rewriting and updating of the State Sanitary Code relating to retail groceries and restaurants, and a change in the Generic Drug Law, were developed by the Office staff.

**The Office of Policy and Planning**, which coordinated all legislative activities for the Department and proposed policy recommendations on agency priorities, acted as a liaison with constituent groups of health providers and consumers in the state. During fiscal year 1986, the Office coordinated testimony and tracked the progress of 18 bills filed by the Department and of 376 health-related bills supported by the Department.

### **BUREAU OF MANAGEMENT SERVICES**

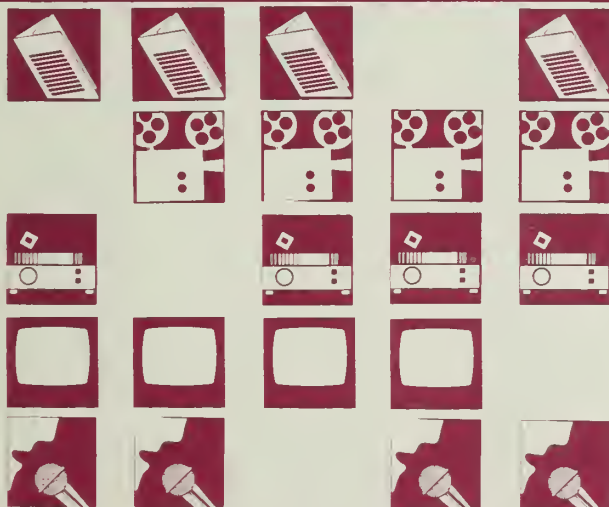
**The Bureau of Management Services** includes the Divisions of Fiscal Resources, Data Processing, Human Resources, Labor Relations, Affirmative Action, Central Services, and the Central Library. To assist the Department's programs in responding more effectively and efficiently to the health needs of the consumer, the Bureau implemented important programs in fiscal year 1986:

- Standardized the fiscal components of the Department's \$70 million purchase of service system to be applied throughout the Department.
- Implemented the Commonwealth's **Model Integrated Data Accounting System (MIDAS)**, a computerized system for paying bills and reporting expenditures, thereby shortening the time providers were required to wait for payment.
- Worked with the Lemuel Shattuck Hospital and a private accounting firm to maximize revenue from retroactive as well as current billings. As a result, the hospital realized \$3 million in **additional revenue** in fiscal year 1986.

- Increased efforts to direct the Department's purchasing to certified **small business and minority vendors** under the Commonwealth's Small Business and Minority Business Enterprise programs.
- The Central Library made information more easily accessible to the Department's staff by becoming part of three **additional computer systems**. The MINET System, a collection of computerized services, includes an electronic mail network (MED/MAIL), a factual drug data base, and a factual data base for diagnosis of disease. The library used the capabilities of the MED/MAIL system to send an emergency request for a liver donation, and to survey perinatal care standards of other states.

# HEALTH EDUCATION RESOURCE DIRECTORY

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH



## PUBLIC INFORMATION AND HEALTH EDUCATION

**The Office of Public Information and Health Education**, which is primarily responsible for keeping the public up-to-date on public health issues, expanded its activities to respond to the many changes in public health. In fiscal year 1986, the Office:

- Assisted in the development and coordination of eight statewide **public education campaigns** that alerted the public to the early warning signs of a heart attack; the common risk factors for heart attack, cancer, and stroke; the importance of prenatal care and the prevention of infant mortality; the health risks of smokeless tobacco; AIDS; domestic violence; and diabetic retinopathy.
- Organized the **Press Ahead Campaign**, which included 12 major news conferences, and more than 60 interviews and broadcast appearances by Departmental senior staff, to bring important public health issues to the attention of the public.
- In conjunction with the Office of Local Health Services and Regional Operations, coordinated a series of **regional tours** by Department of Public Health senior staff to meet with local health and town officials, community groups, and the press to discuss the state's public health goals and initiatives.
- Prepared a **directory of health education resources** available in the Department and revived **SPECTRUM**, the Department's quarterly newsletter.

By the end of the fiscal year, the Office was preparing to update the **Health Education Resource Directory** and the **Guide to Free and Inexpensive Health Education Materials**, and to conduct a statewide conference on the prevention of interpersonal violence in fiscal year 1987.

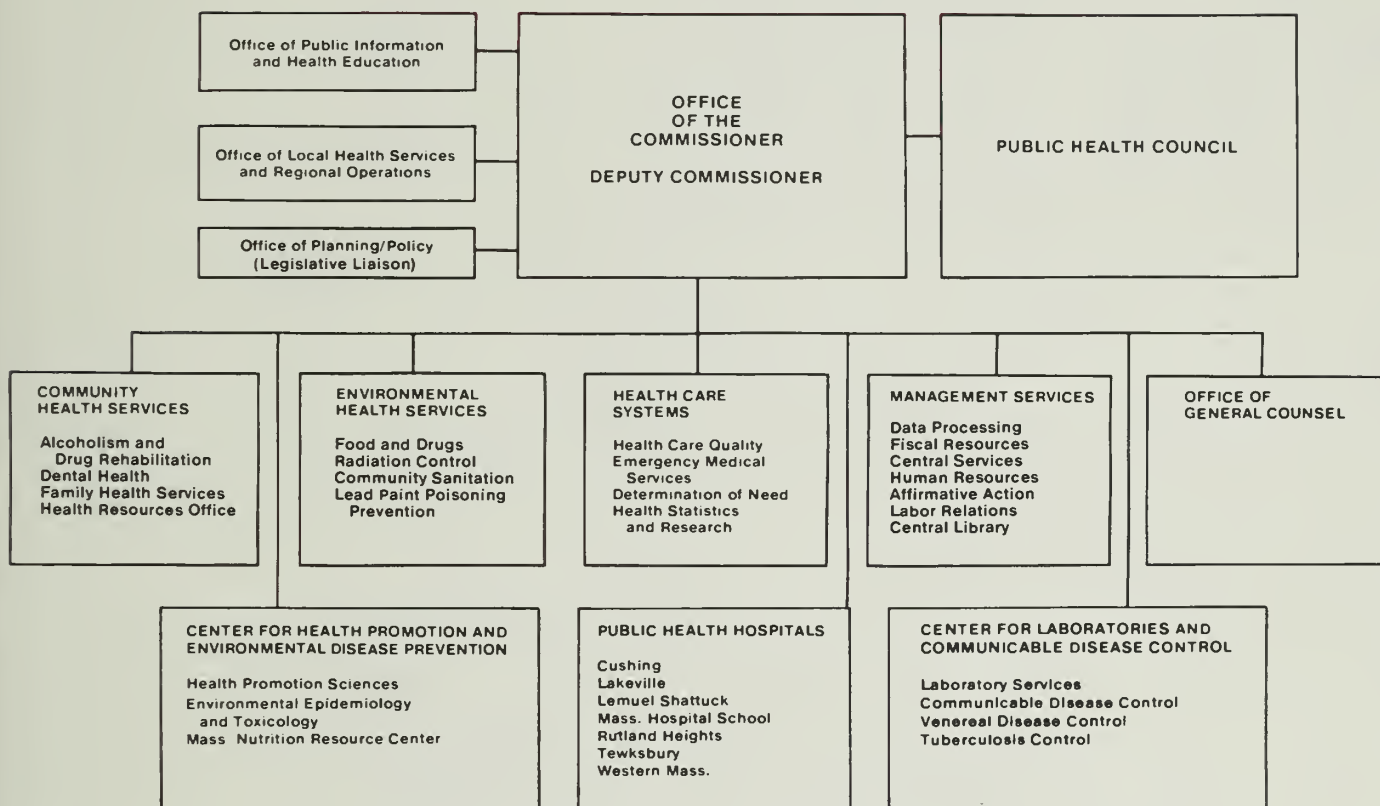


# Department of Public Health Expenditure Report

## July 1, 1985 - June 30, 1986.

|   | State                 | Federal              | Total                 |
|---|-----------------------|----------------------|-----------------------|
| <b>Commissioner's Office</b>  | \$ 955,764            | —                    | \$ 955,764            |
| Management Services   | 3,238,092             | —                    | 3,238,092             |
| General Counsel   | 428,260               | —                    | 428,260               |
| <b>Sub Total</b>  | <b>4,622,116</b>      | <b>—</b>             | <b>4,622,116</b>      |
| <b>Center for Health Promotion &amp; Environmental Disease Prevention</b> |                       |                      |                       |
| Environmental Epidemiology & Toxicology                                   | 854,401               | 67,792               | 922,193               |
| Health Promotion Sciences   | 540,002               | 677,504              | 1,217,506             |
| <b>Sub Total</b>  | <b>1,394,403</b>      | <b>745,296</b>       | <b>2,139,699</b>      |
| <b>Office of Local &amp; Regional Health Services</b>                     | <b>786,975</b>        | <b>529,559</b>       | <b>1,316,534</b>      |
| <b>Community Health Services</b>  |                       |                      |                       |
| Family Health Services  | 19,532,998            | 11,435,818           | 30,968,816            |
| Alcoholism  | 23,509,290            | 4,384,039            | 27,893,329            |
| Drug Rehabilitation   | 7,867,221             | 4,582,517            | 12,449,738            |
| Nutrition   | 4,814,555             | 26,082,286           | 30,896,841            |
| Dental Health   | 2,429,555             | 262,550              | 2,692,105             |
| Fluoridation Reimbursement  | 108,163               | —                    | 108,163               |
| Community Health Services   | 1,635,689             | —                    | 1,635,689             |
| Uncompensated Care  | 2,900,000             | —                    | 2,900,000             |
| <b>Sub Total</b>  | <b>62,797,471</b>     | <b>46,747,210</b>    | <b>109,544,681</b>    |
| <b>Environmental Health Services</b>                                      |                       |                      |                       |
| Lead Poisoning Prevention   | 1,135,092             | 660,000              | 1,795,092             |
| Radiation Control   | 325,596               | 34,057               | 359,653               |
| Food and Drugs  | 1,507,389             | —                    | 1,507,389             |
| Community Sanitation  | 46,701                | —                    | 46,701                |
| Right-to-Know   | 173,322               | —                    | 173,322               |
| <b>Sub Total</b>  | <b>3,188,100</b>      | <b>694,057</b>       | <b>3,882,157</b>      |
| <b>Health Care Systems</b>  |                       |                      |                       |
| Health Care Quality   | 4,111,601             | 760,989              | 4,872,590             |
| Determination of Need   | 896,108               | —                    | 896,108               |
| Emergency Medical Services  | 635,579               | 1,017,648            | 1,653,227             |
| Health Statistics   | 1,707,612             | 1,857,413            | 3,565,025             |
| <b>Sub Total</b>  | <b>7,350,900</b>      | <b>3,636,050</b>     | <b>10,986,950</b>     |
| <b>Social and Communicable Disease Control</b>                            |                       |                      |                       |
| AIDS  | 1,392,594             | 15,665               | 1,408,259             |
| State Laboratory  | 13,482,978            | 1,562,730            | 15,045,708            |
| <b>Sub Total</b>  | <b>14,875,572</b>     | <b>1,578,395</b>     | <b>16,453,967</b>     |
| <b>Hospitals</b>  |                       |                      |                       |
| Cushing Hospital  | 13,987,884            | —                    | 13,987,884            |
| Lakeville Hospital  | 8,988,688             | —                    | 8,988,688             |
| Lemuel Shattuck Hospital  | 22,603,077            | —                    | 22,603,077            |
| Massachusetts Hospital School   | 8,022,524             | —                    | 8,022,524             |
| Rutland Heights Hospital  | 8,010,749             | —                    | 8,010,749             |
| Tewksbury Hospital  | 23,305,594            | —                    | 23,305,594            |
| Western Massachusetts Hospital  | 6,670,915             | —                    | 6,670,915             |
| <b>Sub Total</b>  | <b>91,589,431</b>     | <b>—</b>             | <b>91,589,431</b>     |
| <b>TOTAL</b>  | <b>\$ 186,604,968</b> | <b>\$ 53,930,567</b> | <b>\$ 240,535,535</b> |

**EXECUTIVE OFFICE OF HUMAN SERVICES**  
**MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH**  
 June 30, 1986





**The Commonwealth of Massachusetts  
Michael S. Dukakis, Governor**

**Executive Office of Human Services  
Philip W. Johnston, Secretary**

**Department of Public Health  
Bailus Walker, Jr., Ph.D., M.P.H., Commissioner  
Chairman, Public Health Council**

**Public Health Council**

|                                    |           |
|------------------------------------|-----------|
| Robert J. Brennan, M.D.            | 1980-1986 |
| Arthur G. Koumantzelis, C.P.A.     | 1985-1987 |
| Alfred A. Ponte, B.B.A.            | 1981-1987 |
| Sean Rush, M.B.A.                  | 1982-1988 |
| Susan A. Windham, Ph.D.            | 1983-1989 |
| Bertram A. Yaffe, B.Ph.            | 1984-1990 |
| James L. McGuire, M.D.             | 1984-1990 |
| Simon Leeming, J.D.                | 1985-1991 |
| Barbara Corcoran, <i>Secretary</i> |           |



**1986 Annual Report**

**Editor:** Pearl K. Russo

**Art Director:** Dennis Sterzin

**Graphic Design:** Roger M. Davenport, Ted Polomis

**Photo Credits:** Barbara Barthel, Kevin Caira, Dorothy Coviello,  
Joshua Levine, Media Matrix, Tom O'Connell, William O'Donnell,  
Dennis Sterzin

**June 30, 1986**

**Massachusetts Department of Public Health  
150 Tremont Street, Boston, MA 02111  
(617) 727-2700**







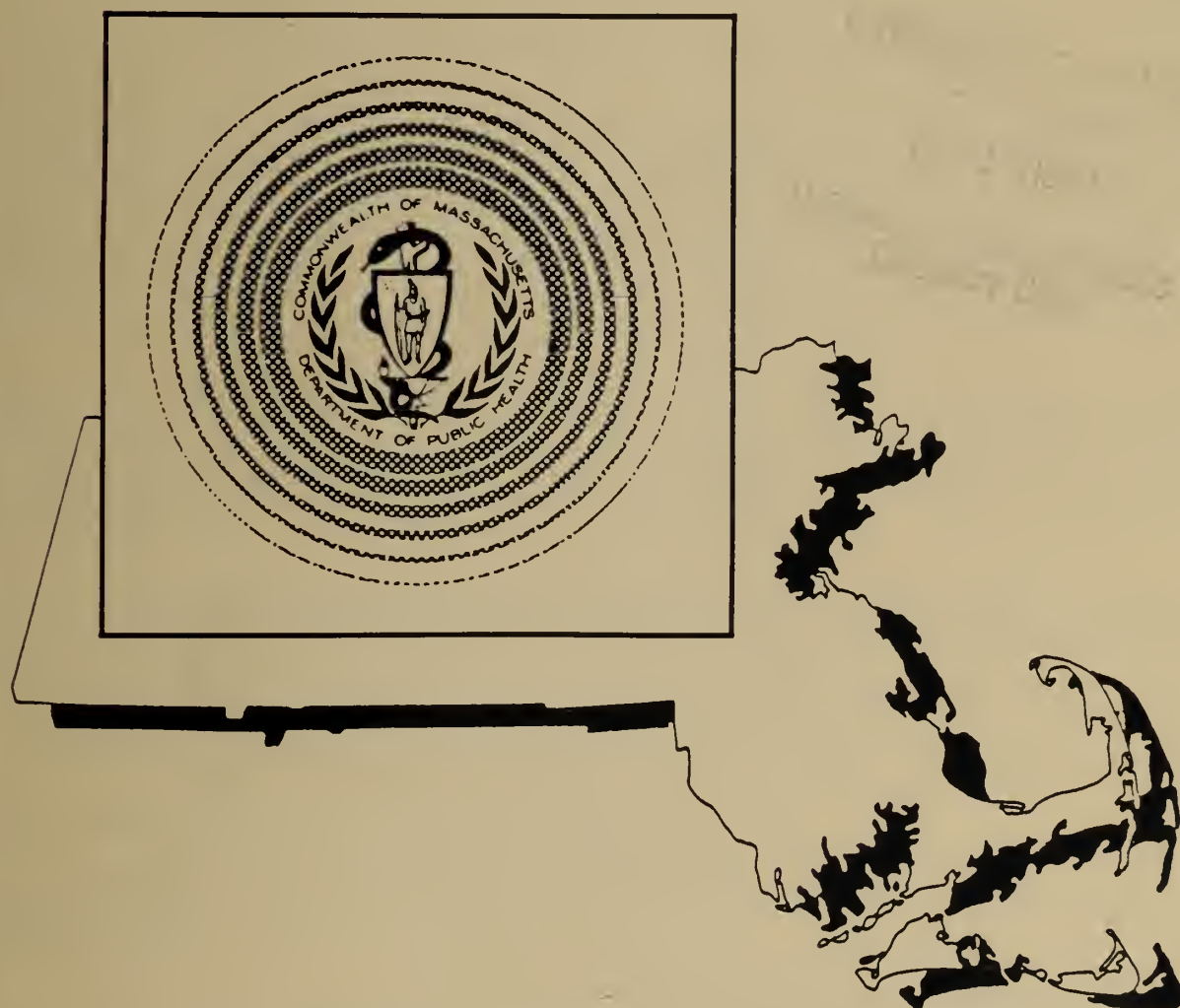
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# ***Meeting***

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# ***the Challenge***

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**1988 Annual Report**  
**Massachusetts Department of Public Health**





## FROM THE OFFICE OF THE COMMISSIONER

The fiscal year that closed on June 30, 1988, marked the end of my first nine months as Commissioner of the Department of Public Health, an exhilarating as well as sobering experience for me. I came into a Department that had grown greatly in the past five years, and that reflected the changing role and function of public health throughout the country. Moreover, the Department budget had more than doubled; entire divisions and programs had been transferred from other agencies, such as Drug Rehabilitation, Early Intervention, Cushing Hospital, and dental care in the state schools for the retarded; new programs, like Healthy Start, had been created by the Legislature; and some existing programs, notably WIC, had expanded dramatically.

The Department had, in fact, entered a new era, building on the proud legacy of its past, while responding boldly and creatively to the challenges of the present. These are many: the AIDS crisis, infant mortality, the increase of violence in our society especially among adolescents, improving the health care of the growing population of elderly in the state, reducing environmental health risks, providing accessible health care to the poor, and responding to the needs of health providers throughout the state.

To meet the current and future public health, operational, and administrative challenges that we face, we began a reorganization of the Department. In response to the increased breadth of Departmental programs, we restructured the Department into three major categories, each headed by a Deputy Commissioner:

- \* Environmental and Biological Sciences, which deal with factors and illnesses over which you have little control.
- \* Health Promotion Sciences, which deal with individual life-styles, factors that make you sick, but over which you have some control.
- \* Health Services, which are what we offer if you become sick.

Because of the increased emphasis on both the management and development of human resources services within the Department, we centralized these functions under a strengthened Associate Commissioner.

Within the past five years, the proliferation of the acquired immunodeficiency syndrome (AIDS) has become a major public health problem. As a result of this rapid growth and the increased diversity of programs, policy planning, education and budgetary functions were centralized under one office under the direction of an Assistant Commissioner reporting directly to the Commissioner. This process of centralization helped to ensure that AIDS activities were being carried out throughout the Department.



Although the organizational structure of the Department has changed, the Department remains dedicated to its original statement of purpose: "...take cognizance of the interests of health and life among the citizens of the Commonwealth." (Acts of 1869 establishing the State Board of Health.) This declaration has been updated to express the basic goals of the Department today:

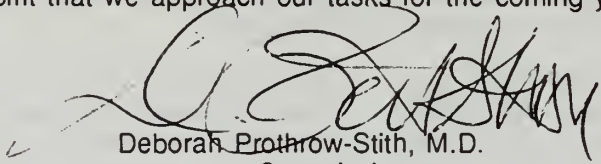
- \* To prevent disease and physical impairment.
- \* To identify, investigate, and eliminate their causes.
- \* To ensure the availability, the accessibility, and the quality of appropriate health services.
- \* To seek to provide those services when they are not available elsewhere.
- \* To instill and reinforce the responsibility of all individuals in the preservation of their own health and that of their fellows.
- \* To help foster a healthy society through health promotion and education.

To improve the health of the Commonwealth's approximately six million citizens, therefore, remains a vital aspect of the activities of the Department of Public Health. How this can best be achieved as we approach the Department's 120 birthday has been receiving serious consideration from all divisions, units, and programs. In their deliberations, they have stressed the importance of programs to prevent serious illness and injury and to maintain good health. At the same time, regulations and health planning to contain cost will be maintained and streamlined wherever possible.

As we complete our first annual report, we recall the prescient words of the first chairman of the Massachusetts Board of Health, Dr. Henry I. Bowditch, in his first annual report:

"Our work is for the far future as well as the present, and at this very opening of our labors we should try to place ourselves above the region of merely local or temporal excitement or partisan warfare, in order that we may act wisely and for the ultimate good of the whole people."

It is in this spirit that we approach our tasks for the coming year.



Deborah Prothrow-Stith, M.D.  
Commissioner

## **STRENGTHENING EFFORTS TO COMBAT AIDS**

Responding to the most important public health issue facing the Commonwealth and the nation - the AIDS epidemic - the Department established the AIDS Office, under the direction of an Assistant Commissioner reporting directly to the Commissioner of Public Health. In fiscal year 1988, the AIDS Office focused on strengthening the base on which its programs are founded: surveillance, research, counseling and testing; education and prevention; and treatment and services. State funds of \$4.07 million provided the resources to maintain the Department's strong commitment to expanding its efforts, while targeting the most high-risk populations.



## SURVEILLANCE AND TESTING

AIDS surveillance activities, located at the State Laboratory Institute in Jamaica Plain, have been carried out since 1983 as part of a collaborative program with the Boston Department of Health and Hospitals. A team of epidemiologists has documented and monitored the growing number of reported AIDS cases.

- \* During fiscal 1988, the number of cases reported outside the metropolitan Boston area increased, while reported cases among intravenous drug users grew at a faster rate.
- \* The major source of information on AIDS, the Surveillance Unit, provided material for the media, health professionals, AIDS service organizations, and other agencies in the state. The AIDS Newsletter, a joint monthly publication of the Surveillance Unit and the Boston Department of Health and Hospitals, reached over 3,000 persons with data on AIDS cases.
- \* The number of alternative test sites, where anonymous HIV antibody counseling and testing are available, increased from eight to 14.
- \* During fiscal year 1988, waiting lists of eight weeks at some sites were cut in half. Approximately 3,000 persons had HIV antibody tests during 1987, a 100 percent increase over 1986.
- \* HIV/AIDS education and counseling were integrated into the Department's sexually transmitted disease (STD) clinics, and STD program staff were trained in HIV counseling, testing, and infection control.
- \* A walk-in counseling and testing program, targeted to intravenous drug users, was developed at Boston City Hospital in cooperation with the Department's Division of Substance Abuse.

## EDUCATION AND TRAINING

- \* Regulations approved by the Public Health Council in February 1988 required programs that provide drug treatment, family planning, prenatal, and STD services to provide AIDS education to clients. Town clerks issuing marriage licenses and physicians performing premarital blood tests were also required to offer HIV education.
- \* The AIDS Office produced a five-brochure AIDS Education Series; over 250,000 pamphlets were distributed to providers and town clerks.
- \* An AIDS curriculum guide and training program were developed with the cooperation of the Department of Education for educators in over 30 school districts.
- \* Education and training programs concentrated on public schools, drug treatment programs, and on public and private programs serving women, Hispanic and Black communities, and adolescents. Efforts to reach minority and bilingual communities were enhanced by having bilingual and Black health educators on the AIDS Office staff.
- \* The Department continued to fund AIDS hotlines, in English and Spanish, throughout the state, to provide instant access to information, support, and referral to persons in need of assistance. The information Hotline at the AIDS Action Committee, funded by the Department, averaged over one thousand calls a month.

## SERVICES AND TREATMENT

- \* For the second year, seven home health programs and one home-based hospice service were funded to provide specialized services to AIDS patients. In certain areas of the state, women with children were the primary beneficiaries of home health services, an indication of the increasing rate of infection among women in the urban areas of the Commonwealth.
- \* The AIDS Office has continued to support the five-bed Pediatric Residential Care Facility at Boston City Hospital for children with AIDS.
- \* In collaboration with the Massachusetts Hospital Association and the Infectious Disease Unit, Massachusetts General Hospital, the AIDS Office offered HIV training workshops to the staff of eight community hospitals and to over 30 physicians who give primary care to persons with HIV infection and related diseases.
- \* Chesed House, on the grounds of the Department's Western Massachusetts Hospital, continued to serve persons with AIDS and other related illnesses. The five-room group home, funded by the Department through a contract with Jewish Family Services of Springfield, offered a supportive environment to enhance the quality of life of the residents - families, single mothers with children, couples or single persons - while they reestablish family or other ties.
- \* The AIDS Office, through a grant from the federal government, implemented the AZT (azidothymidine) Reimbursement Plan to subsidize the cost of AZT for the treatment of AIDS for persons unable to afford the drug. At the end of the fiscal year, 75 persons were participating in the plan.

## RESEARCH

- \* Massachusetts, one of the first states in the nation to fund medical research, received \$18 million in federal funds to support AIDS research in the Commonwealth.



## **ENVIRONMENTAL AND BIOLOGICAL SCIENCES**

The Environmental and Biological Sciences Branch of the Department of Public Health encompasses three bureaus - Communicable Disease Control, Laboratory Sciences, Environmental Health - and the Division of Environmental Epidemiology and Toxicology, all of which are essential to protecting the environment and to preventing the spread of disease.

## COMMUNICABLE DISEASE CONTROL

The Bureau of Communicable Disease Control carries out health surveillance and disease control activities to protect the health of the people of the Commonwealth through testing, vaccination, treatment, and the tracking and analysis of communicable disease trends. It also provides on-site assistance in the investigation and control of outbreaks through both central and regional epidemiologic teams.

### Sexually Transmitted Disease (STD) Program

- \* A major focus of the STD Program was the integration of education on AIDS into all STD programs and clinic activities. All patients attending one of the 16 state-funded STD clinics received information about AIDS and the human immunodeficiency virus (HIV) infection.
- \* Confidential HIV antibody testing and counseling were expanded to 14 STD clinics during the fiscal year where over 2,000 STD clinic patients were tested.
- \* Syphilis in homosexual men in the state decreased dramatically, whereas it increased at an alarming rate among heterosexuals, particularly among minority women in urban centers. Disease control measures included intensive outreach efforts by Division staff to infected persons and their sexual contacts.
- \* Antibiotic resistant gonorrhea continued to be a problem in Massachusetts as in the nation as a whole. Advisories were issued to health care providers in eight of the 14 counties with high resistance rates. Risk factors were outlined, and treatment guidelines and follow-up recommendations were presented.
- \* During calendar year 1987, 535 new AIDS cases were reported, a 62 percent increase over 1986. The fastest growing AIDS risk group was intravenous drug users (IVDU). The number of IVDU cases diagnosed in 1987 was 2.5 times greater than in 1986; AIDS cases among sexual partners of IVDUs tripled between 1986 and 1987.
- \* HIV antibody counseling and testing were further expanded by increasing sites and hours in the Alternative Testing Site (ATS) Program, which scheduled over 280 clients a week by the end of 1988.
- \* Program staff worked with other bureaus and agencies, including: the Division of Drug and Alcohol Rehabilitation, to implement programs on AIDS education and HIV antibody counseling and testing in drug treatment facilities; the Department of Youth Services, to provide staff training on AIDS and HIV counseling and testing for adolescents; the Department of Correction, to aid in the development of AIDS prevention services for female prisoners at the Framingham Correctional Facility; and the Office of Refugees and Immigrants.

### Tuberculosis (TB) Program

- \* During calendar year 1987, Massachusetts experienced a 6 percent decrease in cases of tuberculosis (TB). Three hundred and ninety-six cases were reported for a statewide case rate of 7.2 per 100,000. Cases among high-risk populations, however, such as the homeless, the foreign born, and HIV-infected persons, increased.
- \* The Department continued to provide free, direct diagnostic services and treatment for TB cases and their contacts through its statewide network of 10 inpatient and 31 outpatient programs in community hospitals. Over 24,000 clinic visits were made during 1987.
- \* Cross-matching of the TB/AIDS case register showed 75 patients with both diseases reported over the past five years. Appropriate measures were taken to address this problem: An ongoing TB/AIDS task force developed educational materials for TB clients on HIV risks; and a day-long symposium, "TB and AIDS: The Challenge of the 1990s," was held in May 1988 for TB clinicians.
- \* The TB Program completed a five-year retrospective review of length of stay and cost data for homeless persons with TB. As a result, an alternative site to provide inpatient TB care was developed, and plans completed for a respite unit for the homeless at the Shattuck Hospital to open early in fiscal year 1989.



### **Refugee Health Program**

- \* The Refugee Health Program (RHP) was developed to respond to the health care needs of the growing refugee population in Massachusetts. RHP monitored health assessments and provided outreach services for 2,200 new arrivals during fiscal year 1988.
- \* RHP outreach staff provided case management services to 1,566 refugees for the treatment and control of TB, leprosy, and hepatitis B.
- \* The RHP Neonatal Hepatitis B Program provided services to pregnant Southeast Asian women who are hepatitis B carriers and Hepatitis B vaccine to their newborn infants. Vaccination is necessary to prevent infection with the hepatitis B virus and the serious sequelae of such infection - chronic liver disease and liver cancer.

### **Immunization Program**

- \* The annual immunization survey of over 240,000 day-care and school-aged children in Massachusetts showed that immunization levels for measles, mumps, rubella, diphtheria, tetanus and polio remained at over 98 percent.
- \* A new conjugate *Haemophilus influenzae* type b vaccine was licensed in January 1988; the vaccine is effective in children as young as 18 months. The Department provided free vaccine to health care clinics that receive public funding to ensure that children at highest risk of disease receive the vaccine.
- \* Over 253,000 doses of influenza vaccine were provided free of charge to high-risk residents of the Commonwealth - mainly the elderly and residents of nursing homes.

### **Epidemiology Program**

- \* The Working Group of Foodborne Illness (WGFI), a departmental interdisciplinary team, provided epidemiologic investigations, inspections, and laboratory assistance in 245 food-related incidents in the state that involved over 1,250 persons.
- \* The association of a dramatic increase in the northeastern United States of *Salmonella enteritidis* infection with eggs led to a state and federal working group to evaluate extensively egg production and flock testing. The WGIF sent a statewide advisory on eggs and salmonellosis to all nursing homes, hospitals, prisons, and colleges.
- \* The possible association of a common childhood viral rash illness, Fifth Disease, caused by a parvovirus, with adverse birth outcomes in pregnant women who become infected with the virus, led to the participation of staff in a state-federal working group to evaluate such risks and develop testing protocols and control measures.

### **Surveillance Program**

- \* The Surveillance Program processed morbidity data on more than 23,000 cases of infectious disease covering more than 50 disease groups. During the fiscal year, nearly 200 requests for information relating to such data were processed; almost 50 percent of the requests came from outside sources such as legislators, local boards of health, health care students, media and the general public.
- \* Collaborative activity with the AIDS Program resulted in an enhanced ability to evaluate the interaction of a variety of communicable diseases with HIV infection. A special data base for TB/AIDS coinfection was developed, and a possible association of genital ulcer disease with IVDU was evaluated.

## LABORATORY SCIENCES BUREAU

The Bureau of Laboratory Sciences, despite a loss of staff, met increased demands for services during the fiscal year. The Bureau provided diagnostic testing, surveillance programs, laboratory investigations of diseases, drug analyses, vaccines and serums, as well as consultation on local, state, and federal health problems.

- \* The immediate benefits of disease prevention resulted from the universal distribution of the diphtheria-tetanus-pertussis (DTP) vaccine by the Biologic Laboratories. The development of a safer pertussis vaccine ensured continued public acceptance of immunization, which prevents hundreds of deaths caused by "whooping cough."
- \* The Clinical Investigation and Virology Division led a team effort of a multihospital study, and tested patients who were treated with intravenous cytomegalovirus (CMV) immune globulin, made in the Biologic Laboratories, to prevent CMV disease in kidney transplant patients. The study, published in the New England Journal of Medicine, showed that CMV globulin was effective in the prevention of disease.
- \* The New England Regional Screening Program, an outgrowth of the Department's statewide program, continued to implement innovative programs and reduce net state costs. Massachusetts newborns were screened not only for phenylketonuria (PKU) and other inborn errors of metabolism, and for hypothyroidism, but also for toxoplasmosis. Follow-up evaluation of clinical treatment for toxoplasmosis was added to the program.
- \* The laboratory developed a new test method for screening HIV antibody in newborn blood specimens. This was a landmark method for precisely estimating HIV seroprevalence in women of childbearing age.
- \* The Diagnostic Microbiology Laboratories, despite severe staff reductions, provided more services for the diagnosis of infectious diseases. AIDS-related illnesses resulted in increased testing for tuberculosis and syphilis.
- \* The Environmental Laboratories evaluated a wide range of complex health risks from toxic exposures. These efforts included: a study of the effects of maternal drug use, analyses to identify the cause of an unprecedented number of whale deaths off Cape Cod, testing in fish from Quabbin Reservoir to assess ecological changes in this important watershed, surveys of bottled water and foods for contaminants, and design of a study to measure the prevalence of lead exposure in elementary school children.
- \* The Drug Analysis Laboratories continued to provide most of the testing of illicit drugs seized by law enforcement officials. The work has increased steadily over the past six years, and the laboratory has become a recognized center for drug analyses.
- \* The Special Serology Laboratory responded to the challenge of serologic testing for HIV by providing reference diagnostic testing for HIV antibody, surveillance testing to estimate seroprevalence in various subpopulations in the state, and testing services for preventive efforts in state-funded clinics that provide anonymous or voluntary HIV antibody testing and counseling.



## BUREAU OF ENVIRONMENTAL HEALTH SERVICES

As the number of toxic pollutants and contaminants in the soil, water, ambient air, and food supplies continue to multiply, the Department has intensified its efforts to reduce the risks of physical, chemical, and biological elements in the environment. These activities are carried out through the four divisions of the Bureau of Environmental Health Services, which identify and evaluate environmental hazards to human health, and develop measures to reduce such risks.

### Division of Food and Drugs

The primary goal of the Division of Food and Drugs is to protect consumers from unsafe, fraudulent or deceptive practices in the food, drug, medical device, cosmetic, pesticide and other consumer product industries.

To prevent foodborne illness, the Division:

- \* Participated in 245 investigations of reported foodborne illness affecting approximately 1,250 people.
- \* Proposed regulations governing quality and labeling of bottled water and carbonated nonalcoholic beverages.
- \* Offered training programs, "Preventing Foodborne Illness," to 130 people and "Hazards Analysis Critical Control Point," to 95 food inspectors.

To prevent consumers from unsafe prescription drugs and to prevent drug diversion, a growing problem in the state, the Division:

- \* Began planning for the development of a multiple copy prescription program to be implemented in fiscal year 1989.
- \* Initiated a program funded by the federal Food and Drug Administration (FDA) to increase physician reporting of suspected adverse drug reactions.
- \* Promulgated regulations making it easier to review pharmacy prescription files for most frequently abused pharmaceuticals.
- \* Published four sets of amendments to the Massachusetts List of Inter-Changeable Drugs, including 40 entries representing recently approved drugs for interchange, and several hundred additions to the existing list of interchangeable drugs.

To reduce potentially dangerous food and environmental contamination due to the use of pesticides, the Division:

- \* Began phase II of the daminozide regulations, which reduced the maximum allowable levels of the pesticide for adult heat-processed apple products and infant and baby foods.
- \* Reviewed decisions on pesticide registration as a member of the Massachusetts Pesticide Board Subcommittee, and contributed to restrictions on alachlor, a heavily used corn herbicide, which has been detected in private wells in the state.
- \* The Division's Field Operations Programs conducted 6,877 inspections to guarantee the safety of food, drug devices, cosmetics and other consumer products; audited food protection programs in five cities and towns, and initiated a follow-up program to assess local response to these audits; and imposed 75 embargoes and approved 70 voluntary destructions of contaminated food and drugs.

### The Childhood Lead Poisoning Prevention Program

The Childhood Lead Poisoning Prevention Program increased its efforts to reduce the incidence of lead poisoning in children through public education and the removal of residential lead hazards before children are poisoned.

- \* Comprehensive legislation entitled "An Act to Further Prevent Lead Poisoning" became law in January 1988, thus strengthening the Department's mandate to develop new prevention strategies to reduce the incidence of lead poisoning, improve, and extend the identification and abatement of residential lead hazards, and ensure that all lead-poisoned children are identified and treated.
- \* Over 205,500 children were screened for lead poisoning in fiscal year 1988, an increase of 15 percent over the previous year. Fifty-one percent of Massachusetts children between the ages of nine months and six years were screened. The Division's lead laboratory analyzed 186,521 blood specimens, a 15 percent increase over fiscal year 1987.

- \* The Division developed and implemented a new Property Transfer Notification Program to increase the identification and preventive removal of residential lead hazards before children are poisoned. The Division's objective to develop a self-explanatory program for promoting voluntary compliance with the Lead Law has thus been achieved.
- \* Approximately 2,750 children received case management services during the year; 446 children throughout the state received chelation services, and 1,232 were discharged following completion of medical and environmental services.
- \* The Division's environmental inspectors completed 636 initial inspections and 2,341 reinspections. Of these, 327 were in response to poisoned children; 112 were inspections of day care centers; and 197 were performed upon requests of landlords, parents, and other agencies. After completion of deleading, 477 environmental cases were closed during the year.

### **The Division of Community Sanitation**

The Division of Community Sanitation through its three units - Environmental Hygiene, Urea Formaldehyde Foam Insulation (UFFI) Program and the Right-to-Know Program - carried out activities to protect the health of the residents of the Commonwealth from environmental hazards.

- \* Fiscal year 1988 was the first complete year for which the Department had responsibility for the inspection of swimming pools, bathing beaches, and family-type recreational camps. Staff carried out major efforts in assessing local pool inspection programs and in inspecting state swimming pools and recreational areas.
- \* During fiscal year 1988, the UFFI Program approved the removal of UFFI from 122 homes at a cost of \$2,883,425, although 2,673 homes containing UFFI had been tested for formaldehyde levels. About 1.75 percent of these homes had formaldehyde levels greater than 0.1 parts per million (ppm).
- \* As the awareness of health problems associated with indoor pollution has grown, the number of requests for assistance received by the Environmental Hygiene Unit has increased. Most of the problems were traced to inadequate ventilation.
- \* Under the provisions of the Massachusetts Right-to-Know Law, Division staff inspected 82 worksites, representing 7,036 workers, to ensure compliance with applicable standards before approving the facility as a research laboratory - 77 worksite requests were approved and five were denied. Twenty-six products received trade secrets exemptions; 121 products were denied. The unit responded to approximately 2,000 inquiries on the health effects of substances on the Massachusetts Substance List, and conducted seminars for local boards of health, professional organizations, industry groups, and local emergency planning committees.

### **The Radiation Control Program**

The Radiation Control Program, which is responsible for protecting the public from both ionizing and nonionizing sources of radiation, carried out programs to protect the health of the population:

- \* Completed 1,057 surveys of diagnostic x-ray units in hospitals, private medical and dental offices, as well as inspections of nuclear medicine departments.
- \* Conducted a special survey to study radiation safety efforts at hospitals and clinics relative to patient exposure during chest x-rays.
- \* Resurveyed all mammography facilities for inclusion in the Nationwide Evaluation of X-Ray Trends Program.
- \* Conducted initial surveys of all new medical x-ray facilities in the Commonwealth, and site inspections of all new installations using magnetic resonance imaging (MRI).
- \* Mailed out 20,000 informational packets on radon, held public information seminars on radon, and offered technical assistance to homeowners to reduce elevated levels of radon in the home.
- \* Maintained extensive environmental surveillance and inspection of fixed nuclear power stations, two in Massachusetts and one in Vermont on the Massachusetts border.
- \* Conducted a series of training programs for emergency workers in the 10-mile emergency planning zones around the Pilgrim, Rowe, and Vernon nuclear power plants.



## ENVIRONMENTAL EPIDEMIOLOGY AND TOXICOLOGY

The Division of Environmental Epidemiology and Toxicology, which reports directly to the Deputy Commissioner for Environmental and Biological Sciences, comprises three units - Community Assessment, Environmental Epidemiology, and Environmental Toxicology.

### Community Assessment Unit

The Community Assessment Unit, which began operating in the spring of 1988, was established to respond to the growing public awareness of, and concern over, potential health effects of exposure to toxic substances in the environment.

- \* The unit served a triage function, combining both science and policy in determining its preliminary health assessment work.
- \* In 1988, the unit responded to several hundred requests for information or assistance and completed more than a dozen reports.
- \* Monies provided by the Agency for Toxic Substances and Disease Registry allowed the unit to work with staff from the federal agency to complete environmental health assessment at nine of 21 federal superfund sites in Massachusetts.

### Environmental Epidemiology Unit

Working in collaboration with the Community Assessment Unit, the Environmental Epidemiology Unit began follow-up studies and continued ongoing investigations in the state.

- \* As a result of preliminary investigations in Billerica and Walpole, the Environmental Epidemiology Unit has planned further investigations in these two communities.
- \* Ongoing epidemiologic investigations included a study of bladder cancer in South Hadley, childhood leukemia in Woburn, and several types of cancer on the Upper Cape.

### Environmental Toxicology Unit

Working with the other two units in the Division, the Environmental Toxicology Unit provided services designed to identify the determinants of disease in order to prevent or reduce the future incidence of such diseases as leukemia, cancer of the kidney, pancreatic cancer, and birth defects.

- \* The Environmental Toxicology Unit also began studies of nine superfund sites throughout the state.
- \* The unit provided staff support for the Department's pesticides and fish toxins programs in collaboration with the Division of Food and Drugs.
- \* A two-year investigation of reproductive outcomes and environmental exposures in Woburn was designed in collaboration with the federal Centers for Disease Control and funded at \$1.3 million by the Agency for Toxic Substances and Disease Registry.

## **HEALTH PROMOTION SCIENCES**

The prevention of chronic disease, unintentional injury, and violence among the people of the Commonwealth remains the keystone of all activities of the Department of Public Health. A multifaceted approach to this end emphasizes changing people's lifestyle. The Health Promotion Sciences Branch of the Department oversees the activities of two bureaus that have major responsibility for fostering a healthy society - Adult and Elderly Health; Parent, Child and Adolescent Health - and the Bureau of Health Statistics, Research and Evaluation.



## **BUREAU OF ADULT AND ELDERLY HEALTH**

The Bureau of Adult and Elderly Health through its two divisions, Adult Health Promotion and Elderly Health Promotion, and its three units - Women's Health, the Office of Nonsmoking and Health, and the Office of the Refugee Health Services Planner - supported activities to encourage the adoption of risk-reducing lifestyles among Massachusetts residents. The Bureau began a major cancer-control planning effort in conjunction with private and public agencies throughout the state that have supported cancer control programs in the past. The goal of the Massachusetts Cancer Control Coordinating Committee is to produce a statewide cancer control plan that will emphasize the importance of a public/private partnership.

### **The Division of Elderly Health Promotion**

The Division of Elderly Health Promotion was established during the fiscal year to respond to the special health needs of the elderly population in the state, which is increasing rapidly. Currently, the elderly comprise about 13 percent of the population of the Commonwealth; by the year 2020, the percentage is expected to be about 25 percent. The major activity for the Division was the employment of a director and the development of a mission statement.

### **The Division of Adult Health Promotion**

The Division of Adult Health Promotion conducted the following activities:

- \* Provided funding for 10 agencies to conduct lifestyle intervention programs in their communities that were targeted to reduce the prevalence of the risk factors of smoking, excess dietary fat, and physical inactivity.
- \* Provided consultative services, through five regionally-based health promotion coordinators, for developing worksite health promotion programs that focus on smoking cessation, reducing excess dietary fat and cholesterol, controlling high blood pressure, and encouraging exercise.
- \* Funded 12 agencies to conduct a statewide blood pressure screening and education program that provided services to over 40,000 clients.
- \* Conducted over 7,500 cholesterol screenings in Chelsea, Boston, and Worcester as part of its Cholesterol Education Grant funded by the National Heart, Lung and Blood Institute.
- \* Continued the statewide program to prevent blindness due to diabetic retinopathy; screenings took place in the Lion's Club Eyemobile.
- \* Offered training to Departmental personnel in cancer prevention through its National Cancer Institute Grant for a Model Statewide Cancer Prevention Program. Conducted surveys to determine the extent of cancer control activities in physicians' offices, worksites, and schools.

### **The Women's Health Unit**

The Women's Health Unit focused on services for specific problems - reproductive health, occupational health, violence and sexual abuse - and services for particularly vulnerable groups of women such as poor women, women in prison, and women of color.

- \* Held a statewide training program on Sexual Assault and AIDS in January 1988 and developed an interagency committee to establish statewide policy and ongoing training in this field.
- \* With the addition of a Latina Woman's Health coordinator, expanded the reproductive health component to emphasize the health of Latina and Black women.
- \* Developed two all-day training sessions for staff of battered women's shelters on working with children in shelters.
- \* Held a statewide conference on diethylstilbestrol (DES) and continued to coordinate services for women who had been exposed to DES.
- \* Conducted a survey of 200 chemical and electronics industries on their policies concerning reproductive hazards, parenting, and family issues; prepared a report of the data to be issued early in fiscal year 1989.
- \* Developed a brochure in both English and Khmer to inform the community of direct services to Cambodian women who experience sexual assault or domestic violence.

### **The Office of Nonsmoking and Health**

The Office of Nonsmoking and Health, which works to reduce tobacco use through cessation and prevention activities, as well as to protect the health of the nonsmoker, carried out the following activities:

- \* Developed and coordinated an all-day conference on "Smoking in Massachusetts"; about 150 persons heard scientific papers that stressed the effect of tobacco on health and the economy in the state.
- \* Sponsored a conference in March 1988 on "Women vs. Smoking."
- \* Initiated a new multifaceted project to reduce the health effect of smoking on newborns. A simplified cessation guide prepared for the Department, "Smoking for You 2," was made available to obstetricians for distribution to pregnant women who smoke.
- \* Promulgated regulations that require the posting of specific bright yellow signs where tobacco products are purchased, stating, "Sale of cigarettes or any other tobacco products to persons under age 18 is illegal."

### **The Office of Refugee Health Services Planner**

The Office of Refugee Health Services Planner worked with local health agencies to improve access for refugees to health services and health information that are culturally appropriate:

- \* Developed a department-wide Task Force on the Development of Culturally/Linguistically Appropriate Health Education Materials.
- \* Began an assessment of drug and alcohol abuse and service needs through refugee community groups.
- \* Developed materials on immigration and HIV testing and participated in a task force considering issues of immigration.

## BUREAU OF PARENT, CHILD AND ADOLESCENT HEALTH

During fiscal year 1988, the Bureau of Parent, Child and Adolescent Health took over the responsibility of the Division of Family Health Services. (Sections of that Division were also moved to other Bureaus within the Department to create more compatible working groups.) The Bureau's four major divisions - Perinatal Health, Early Childhood, School-Age and Adolescent Health, Child with Special Health Care Needs - work to promote the health of Massachusetts parents, children, and adolescents through a wide range of services. The Bureau also includes an Office of Policy, Office of Regional Programs, Office of Statistics and Evaluation, and an Office of Dental Health.

### Division of Perinatal Health

The Division of Perinatal Health developed and implemented programs designed to promote healthy pregnancies, births, and infants. Its activities were targeted to meet the needs of women, infants, and families known to be at highest risk for poor health outcomes.

- \* Between December 1985 and June 1988, its Healthy Start Program served over 20,000 low-income pregnant women not eligible for Medicaid. During 1988, Healthy Start worked with the Department of Public Welfare to assure a transition for its clients who became eligible for CommonHealth, the new state insurance program, beginning in July 1988.
- \* Over 1,500 infants at risk because of perinatal conditions or socioeconomic and psychological conditions were served through community-based home visit nursing programs.
- \* A Collaborative Perinatal Support System involving all Neonatal Intensive Care Units in the state was funded during the fiscal year to expand and supplement the data-gathering, early identification, and regional support functions of the High Risk Infant Programs.
- \* The Genetics Program continued work on the Human Genetics and You, Me and Others curriculum, and published its semi-annual The Genetics Resource.

### The Office of Nutrition

The Office of Nutrition assumed new responsibilities for the coordination of nutrition programs within the Branch of Health Promotion Sciences. During fiscal year 1988, the Office undertook several new initiatives:

- \* Implementation of a pediatric nutrition surveillance system using Head Start and family day care programs. The first annual report of the surveillance system, "Nutrition Counts," was completed and will be released early in fiscal year 1989.
- \* Implementation of a three-year cooperative agreement with the Centers for Disease Control (CDC), the Office of Nutrition, and the Office of Statistics and Evaluation in the Bureau of Parent, Child and Adolescent Health entitled "Surveillance of Severe Pediatric Undernutrition." Objective of the project is to measure the prevalence of severe undernutrition and to describe associated risk factors and etiology in children under six years of age in Massachusetts.
- \* Statewide dissemination of a survey, "Left Out of the Commonwealth: A Survey of the Emergency Food Network in Massachusetts," which measured the use of food pantries and soup kitchens. The project was carried out in conjunction with three Massachusetts food banks and the Hunger Hotline of Project Bread.
- \* Convening of a series of regional seminars for health professionals and educators on ethnic minority cultural food practices, which focused on the culture of Haitians, Puerto Ricans, Southeast Asians, Southern Blacks, Azoreans and Cape Verdeans.



## Office for Dental Health

The Office for Dental Health worked to prevent dental disease in the Commonwealth through support of fluoridation of public water supplies, educational campaigns on good health practices, and the provisions of dental care for wards of the state.

- \* The number of communities on fluoridated water supplies increased by three in fiscal year 1988 for a total of 109 cities and towns serving over 3.7 million people.
- \* An estimated 80,000 school children in 170 communities participated in the fluoride mouthrinse program. Approximately 585 children in Headstart Programs also participated in the fluoride tablet program.
- \* The Office continued its aggressive action to alert consumers to the adverse effects of smokeless tobacco. A staff member served as a consultant to the Centers for Disease Control. A panel of consultants developed a curriculum on smokeless tobacco for children in kindergarten through grade three. North Beverly Elementary School was one of the eight sites nationwide to test the curriculum.
- \* The Department contracted with Tufts University to provide comprehensive dental services to 4,000 developmentally disabled institutionalized clients, and to 2,500 developmentally disabled clients in communities. Screening, referral, and dental education services were provided to 5,800 special needs clients in communities through a contract with Boston University.

## HEALTH STATISTICS, RESEARCH AND EVALUATION

Statistics compiled by the Bureau of Health Statistics, Research and Evaluation have become increasingly important as a guide to the Department of Public Health in setting priorities, formulating and implementing health policy decisions, and evaluating program results. Five divisions of the Bureau - Registry of Vital Records and Statistics, Massachusetts Cancer Registry, Health Resources Statistics, Research and Epidemiology, and Public Information and Data Management - are responsible for:

- \* Collecting the core data and records used by the Department for monitoring the health of the residents of the Commonwealth and the performance of its health care facilities.
- \* Making the data readily available to the public through dissemination of publications and computer tapes, public access to vital records, and through the Bureau's special public information telephone line (617-727-DATA).
- \* Providing certified copies of vital records for a wide variety of personal, legal, and administrative purposes.
- \* Improved timeliness of data production reflected in the continued implementation of the Registry of Vital Records and Statistics' Automated Vital Records Statistical System (AVSS) in Massachusetts hospitals. By the end of fiscal year 1988, hospitals accounting for 50 percent of Massachusetts hospitals were operating on AVSS.
- \* Expansion of public use of the Bureau's data through publication of a wide variety of easy-to-read chartbooks, annual reports, and special reports, including "Demographic and Health Characteristics: A Comparison of Massachusetts and the United States, 1940-1985," "Massachusetts Nursing and Rest Home Data Book 1978-1985," "Hospital Bed and Discharge Book," "1982-1985 Special Report on Cancer Incidence in Massachusetts," and the "Annual Report -- Vital Statistics of Massachusetts," and a special edition of "Guide to Vital Statistics of Massachusetts."
- \* Instituted a new publication series entitled Massachusetts Advance Data with its inaugural issue, "Massachusetts Advance Data -- Natality 1986."



## **HEALTH SERVICES**

The Health Services Branch of the Department of Public Health comprises three bureaus -- Public Health Hospitals, Health Care Systems, and Community Health Programs. Through these bureaus, the Department continued to provide direct services through contracts, organized and implemented more special programs, and expanded patient care and ambulatory units in the seven Public Health Hospitals. At the same time, the Bureau of Health Care Systems maintained responsibility for ensuring high-quality health care at reasonable cost to the people of the Commonwealth, and for preventing unnecessary expansion or renovation of health care facilities that add to the cost of health care.

## PUBLIC HEALTH HOSPITALS

Through its seven Public Health Hospitals, the Department has provided a broad range of health care, including preventive, therapeutic, and rehabilitative services, to people of all ages. Sharing a common heritage and history of caring for persons outside the mainstream of health care, the seven Public Health Hospitals represent more than 425 years of service to the people of the Commonwealth. Many programs are similar in all the hospitals; however, each hospital plays a unique role in the provision of health care in Massachusetts.

### Cushing Hospital

For the past 30 years, Cushing Hospital in Framingham has provided high-quality, long-term care to frail, low-income elderly residents with special needs and to their families.

- \* In fiscal year 1988, the 300-bed hospital observed the second anniversary of its 15-bed inpatient Alzheimer Unit. In April 1988, the unit moved to a new space specifically designed to facilitate short-term admissions for evaluation of Alzheimer patients who will later return home with follow-up care and family training to be provided by staff of the program.
- \* During the fiscal year, the Legislature approved funding for the rebuilding of the hospital as the Massachusetts Geriatric Care Center. The new Center will be a 266-bed, long-term care facility, with adequate space for specialized outpatient services, research, and training.
- \* Because of the urgent need to recruit and retain employees in a shrinking labor market, Cushing opened an on-site day care center for 35 children; half of the places are reserved for the children of Cushing staff. The center is adjacent to the Adult Day Center, and joint programs for children and elderly provide positive interactions and benefits for both groups.

### Lakeville Hospital

Lakeville Hospital, which cares for both children and adults with chronic illnesses and in need of rehabilitative services, emphasized returning patients to their communities, and provided intensive therapy.

- \* A six-bed respite unit for adult patients provided temporary supervision and care of dependent people when the caretaker was ill or needed a vacation, or when the patient's condition required reexamination.
- \* Another innovation at the hospital was the day surgery program, in which patients are attended by registered nurses at all times.
- \* Plans were formulated to open a unit in 1989 to meet the needs of patients with neurobehavioral problems, who are often the victims of head injuries, substance abuse, or other diseases, and require specialized treatment in a secure unit.

### Lemuel Shattuck Hospital

The Lemuel Shattuck Hospital, located in the Jamaica Plain section of Boston, provides acute, rehabilitative, chronic and long-term care for several special populations, including clients from the Departments of Mental Health and Correction.

- \* The Shattuck, which has a capacity of 250 beds, totaled 79,000 patient days during fiscal year 1988.
- \* The Bay Cove Mental Health Inpatient Unit, which meets unfulfilled needs of clients of the Department of Mental Health, is located at the hospital. All support and medical consultative services were provided by the Shattuck Hospital.
- \* A 58-bed medical/geriatric program served elderly patients with both chronic diseases and psychiatric problems. This service discharges patients when appropriate, and has developed a system for follow-up after discharge.
- \* The Shattuck opened a new, modern six-bed medical/surgical Intensive Care Unit (ICU) in fiscal year 1988. With the opening of the ICU, the hospital was better able to serve the acute needs of its diverse patient population.
- \* A comprehensive array of diagnostic services complemented the inpatient and outpatient services. A CT scanner was donated to the hospital, and new equipment purchased in mammography, nuclear medicine cardiology, and clinical laboratories.
- \* The AIDS Unit at the Shattuck, the first in the state, provided acute, subacute,



palliative, and rehabilitative services. In November 1987, the Human Immunodeficiency Clinic opened to serve both Department of Correction and community patients. The number of AIDS patients served in fiscal year 1988 more than doubled over the previous year.

- \* The Shattuck Shelter for the homeless expanded in December 1987 to a 170-bed facility where the homeless receive not only food, clothing, and shelter, but also social services, employment training, and medical care. The Shattuck Shelter participated in the citywide Health Care for the Homeless Project, which maintains a two-bed respite unit at the shelter.

### **Massachusetts Hospital School**

The Massachusetts Hospital School, located in Canton, has since 1907 devoted itself to the education and medical and surgical care of physically handicapped but intellectually able children. The hospital's programs serve children and adolescents with muscular dystrophy, cerebral palsy, myelodysplasia, spinal cord injuries, traumatic head injuries, and other chronic conditions. The hospital expanded initiatives to ensure that each young person is returned to the home and community with a stable medical condition and the skills necessary to assume his or her place in society.

- \* The Enabling Youth for Employment (EYE) Project provided training for over 60 young adults to introduce the students to the work world, as well as to secure permanent positions for them after graduation.
- \* Project Access World, housed in a workshop setting, worked with an interdisciplinary team to evaluate the environmental and personal needs of children with moderate to severe physical disabilities. The team designed a customized system of devices for each outpatient for use in the home, school or vocational setting.
- \* The Hospital School developed a comprehensive Speech and Language Department to meet the needs of a growing student population with multiple handicaps.

### **Rutland Heights Hospital**

The Rutland Heights Hospital in central Massachusetts provided high-quality, short-term and long-term services to the underserved populations in the region. The hospital has, over the years, implemented innovative programs to fulfill needs of a diverse population.

- \* A pioneer in developing services for patients with alcoholism, the hospital's Driving Under the Influence (DUI) program provided treatment and counselling as an alternative to a jail sentence for drivers convicted of drunk driving.
- \* The Post Traumatic Stress Disorders Program for Vietnam veterans provided medical care and counseling in a special 12-bed unit.
- \* The six-month retained revenue experiment at the hospital ended on June 30, 1988, with encouraging results. The hospital generated sufficient patient care revenues to meet its current operating requirements.

### **Tewksbury Hospital**

Tewksbury Hospital, with a physical capacity of 950 beds, serves the Merrimack Valley, North Shore, and Greater Boston areas. The care of long-term geriatric and chronically ill patients continued to be the primary emphasis of the hospital.

- \* Building on its experience with clients with alcohol problems, the Tewksbury Hospital developed a program for women identified as chronic alcoholics. The program, when fully implemented, will serve women 45 years of age or older, who are referred primarily from detoxication centers and shelters in the northeast corner of the state. The program will be a residential one, with a length of stay ranging from approximately six months to several years.

### **Western Massachusetts Hospital**

The Western Massachusetts Hospital, located in the foothills of the Berkshires, continued to fill gaps in health care services for a large, scattered community.

\* The most recent program at the Western Massachusetts Hospital is the Head Injury Day Program, a collaborative effort of the hospital and the Department's Statewide Head Injury Program (SHIP). The program, the first in the state, became operative September 1, 1987, to provide a broad range of services -- academic training, community rehabilitation, cognitive rehabilitation, activities to improve daily living skills, and educational testing and counseling -- to 20 persons with brain injuries.

As they assess the shift in the state's population and changing health care needs, the seven Public Health Hospitals have been reexamining their activities and implementing plans to expand or provide services that are most needed by Massachusetts residents. They thus continue to be a unique resource to ensure available and accessible health care of high quality to the people of the Commonwealth.

## HEALTH CARE SYSTEMS

The Bureau of Health Care Systems is responsible for ensuring high-quality health care at reasonable cost to the people of the Commonwealth. It also has responsibility for preventing unnecessary expansion or renovation of health care facilities that add to the cost of health care.

### Health Care Quality

In fiscal year 1988, the Division of Health Care Quality, the patient protection arm of the Department, continued to monitor the quality of health care in over 2,300 health facilities and services: ambulance services, ambulatory surgical centers, blood banks, clinics, clinical laboratories, home health agencies, hospitals, hospices, nursing homes, nursing pools, and rest homes. Through its Advocacy Office, the Division assisted more than 406 consumers and patients with concerns relating to quality of care given Medicare patients by hospitals.

The Division continued the development of regulations and research to answer new health service modalities and to meet policy goals:

- \* Promulgated regulations to ensure adequate care for patients with mental health needs residing in rest homes. The regulations created a new licensure category, the Community Support Facility, which is staffed to admit elderly residents who also require psychiatric care.
- \* Promulgated regulations governing the licensure of hospices that set minimum standards for the operation of such facilities.
- \* Developed regulations governing hospice licensure of freestanding inpatient units for AIDS patients.
- \* Submitted final draft of the DRG report to the Legislature, "Impact of Prospective Payment System on Quality and Access for Medicare Beneficiaries - Massachusetts Findings From Discharge Data." The study indicated that PPS had not resulted in an increase in premature discharge.

### Determination of Need Program

The main objectives of the Department's Determination of Need (DON) Program included the reduction of overall health care costs by preventing duplication of services, promotion of health-care needs of the people, and promotion of equitable geographic and socioeconomic access to health care.

- \* In fiscal year 1988, the DON staff reviewed a total of 176 projects, 16 more than its target of 160. Total capital expenditures for these projects was \$408,676,641, of which \$231,573,342 was approved.
- \* DON staff revised Determination of Need regulations and developed guidelines for the conversion of acute beds to non-acute care services, as mandated by passage of Chapter 23 of the General Laws in April 1988.
- \* The DON Division began the revision of the Department's guidelines for Adult Invasive Cardiac Services, and convened an advisory committee of cardiologists, cardiac surgeons, and consumer and payer representatives to aid in the development of these guidelines.



### **Emergency Medical Services**

The Office of Emergency Medical Services (OEMS) and the Emergency Medical Services Councils ensure prompt, effective prehospital care to patients anywhere in the Commonwealth.

- \* By actively supporting regional medical control and communications systems, OEMS and regional EMS Councils increased the percentage of the Massachusetts population covered by Advance Life Support from 41 percent in 1984 to 53.4 percent in May 1988.
- \* To address the concerns of prehospital and emergency care providers about AIDS and hepatitis B, OEMS conducted public seminars and professional education programs alerting emergency medical technicians (EMTs) to the need for precautions in patient care and sensitizing them to the needs of AIDS patients.
- \* To increase employment opportunities and to help solve the problem of personnel shortages, OEMS developed an innovative EMT training program with Bay State Skills Corporation, Northeastern University, and Action for Boston Community Development. The program provides academic training, ambulance service internships, and social support for welfare recipients interested in careers in prehospital emergency care.

### **Organ Transplant Services**

The Office of Organ Transplant Services continued to develop policy in organ transplantation, to enroll patients in the Organ Transplant Fund, and to reimburse the transplant expenses of enrolled patients.

- \* The Organ Transplant Fund continued to grow. Over 200 patients have now been enrolled, a 200 percent increase over fiscal year 1987. The majority of patients enrolled in the fund were kidney transplant recipients, although heart, heart-lung, liver, pancreas and bone marrow recipients were also included.
- \* In fiscal year 1988, the fund paid approximately \$294,000 for organ transplants, an increase of over 200 percent from the \$93,999 paid in the previous fiscal year. About 35 percent was reimbursement for medication, and 65 percent, for all other expenses.

## COMMUNITY HEALTH PROGRAMS

The Bureau of Community Health Services oversees a broad range of community-based, comprehensive health care programs throughout the state. The Bureau is comprised of three divisions: Substance Abuse Program, Primary Care/Community Health Center Program, and the Special Supplemental Food Program for Women, Infants and Children, more commonly known by its acronym, WIC.

### Substance Abuse Services

The Division of Substance Abuse Services resulted from the merger of the Divisions of Alcoholism and Drug Rehabilitation, a response to the growing interdependence of alcoholism and drug abuse treatment services. Recognizing the rising incidence of AIDS among users of intravenous drugs - current estimates suggest that 30 to 40 percent of IV drug users in the state may be HIV positive - the division took measures to increase sensitivity to the needs of these persons. The division funded programs to provide substance abuse services to the diverse population in the state, regardless of ability to pay.

- \* IV Drug Users -- Initiated a request for proposal (RFP) process to allocate \$2.65 million for treatment of IV drug users in methadone services, residential drug detoxification programs, therapeutic communities, and nontraditional services like acupuncture. Conducted a conference on AIDS and the IV Drug User that dealt with testing, legal issues, special treatment, and special populations within the IV drug-using population.
- \* Women -- Convened Massachusetts' first Women's Alcohol and Drug Awareness Week in November 1987; funded a 35-bed program providing transitional long-term housing for women who are chronic substance abusers; provided residential services for women who are deaf or hard of hearing; outreach and residential treatment services for pregnant women to reduce complications related to alcohol and drug abuse, and birth defects.
- \* Youth -- Established youth-orientated substance abuse services for early intervention; trained Department of Youth Services (DYS) caseworkers to identify, support, and refer youths who abuse substances for treatment; funded a 15-bed program for youths 16 to 18, who have successfully completed a residential program but who cannot return home; collaborated with the Women's Health Unit to support programming for high-risk women in the custody of DHS.
- \* People of Color -- Funded the Hispanic Counselor Training Program to train bilingual/bicultural persons recovering from addiction, paraprofessionals, and health and human service professionals to become substance abuse counselors.
- \* The Homeless -- Implemented a program to provide, for chronic inebriate homeless, counseling, intervention, and referral in the downtown Boston area; funded a night center that provided referral, nursing, and counseling on a drop-in-basis.
- \* The Elderly -- formed an interagency task force to examine alcohol and drug problems among older people, and to identify strategies for prevention, intervention, treatment and aftercare.
- \* The Disabled -- Formed an interagency task force to plan and coordinate a comprehensive regional effort to eliminate barriers to substance abuse services for the disabled.
- \* The Dual-Diagnosed -- Funded a 25-bed alcohol detoxication program for persons with both substance abuse problems and mental illness to reach such clients who are suicidal, have a major psychiatric diagnosis, or have behavior/personality disorders.
- \* Hotline -- Funded a statewide information and referral hotline (1-800-327-5050), which is available 24 hours a day and provides information and referral on prevention, intervention, treatment, and rehabilitation services in the Commonwealth.



### **Massachusetts WIC Program**

The Special Supplemental Food Program for Women, Infants and Children (WIC) provides women, infants, and children under the age of five with supplemental nutritious food, nutrition counseling and health care referrals. During fiscal year 1988, the WIC Program aimed to provide services to the maximum number of eligible Massachusetts residents. Programs highlights included:

- \* Caseload Expansion and Outreach Activity - As a result of intensified outreach activities, such as WIC WALKS (new participants received Stride Rite shoes), the number of participants in the program reached a historic high of 73,600 in June 1988, an increase of 13,700 from the low of the previous year.
- \* Special Target Population Project - Fifty percent of the program's population are members of minority groups, reflecting the project's emphasis on bicultural, bilingual services in the community.
- \* Tailoring - Through reprogramming, WIC nutritionists at local programs were able to tailor WIC food packages to give WIC participants more individualized, nutritionally appropriate amounts of food.
- \* Farmer's Market Coupon Demonstration Project - As part of a coordinated undertaking with the Massachusetts Department of Food and Agriculture, 11,000 WIC families at 12 local WIC programs received \$10 worth of coupons redeemable for fresh produce at community farmers' markets.
- \* Homeless Policy - A first in the nation, the homeless policy developed and implemented procedures to remove barriers to access to WIC services for homeless families. The policy was used as a model for mandating WIC services to homeless persons as part of the federal Hunger Prevention Act of 1988.

### **Community Health Center/Primary Care**

The Community Health Center/Primary Care Division supports and enhances the work of community-based providers by providing a range of programs including:

- \* Operational grants for 44 community health centers.
- \* Funding for 54 comprehensive perinatal and pediatric primary care services at 34 sites throughout the state.
- \* Improved or installed Management Information System (MIS) in 12 community-based facilities.

The program served the following populations:

- \* Low-income families, including 5,500 pregnant women.
- \* Communities of color - over 50 percent of the people served.
- \* Communities with limited health resources in both urban and rural areas.
- \* Non-English speaking groups and new immigrants.

During fiscal year 1988, the Community Health Center/Primary Care Division implemented several new programs:

- \* Conducted a major study of the effect of AIDS on health centers.
- \* Organized the first Annual Primary Care Conference in October 1987 for a wide range of providers, as well as clinical and administrative personnel.
- \* Divided a homeless initiative through primary care providers to give care to the homeless.
- \* Represented (and continues to represent) the Department of Public Health on a memorandum of agreement between the state and federal governments and the Massachusetts League of Community Health Centers for the delivery of primary care.



## **CENTRAL SUPPORT SERVICES**

The Department of Public Health staffs other divisions and offices whose main tasks are support and coordination of services to assist program units and divisions in carrying out their assigned responsibilities.

## **POLICY DEVELOPMENT AND PLANNING**

The Office of Policy Development and Planning, which coordinates all legislative activities for the Department and proposes policy recommendations for agency priorities and programs, acted as a liaison with constituent groups of health providers and consumers in the state. During fiscal year 1988, the Office coordinated and tracked the progress of 18 bills filed by the Department and of 500 health-related bills concerning the Department. Three of the health-related bills signed into law were of special importance:

- \* Chapter 549 - Providing for Management of Low-Level Radioactive Waste -- which created a "cradle to the grave" system for the handling and disposal of low-level radioactive waste.
- \* Chapter 759 - Further Regulating Smoking in Certain Public and Private Buildings - which prohibits smoking in retail food outlets, and in patient-care areas of private and public nursing homes, and requires designated smoking areas in all public buildings.
- \* Chapter 773 - An Act Further Preventing Lead Poisoning - which authorizes the Department to designate specific geographic locations for concentrated deleading activities.

### **The Office of General Counsel**

The Office of General Counsel, which is the legal liaison between the Department and the public, represented the Department in numerous enforcement actions to protect the health and safety of the people of the Commonwealth. These actions included: termination of Medicaid certification of licensure of substandard nursing homes; district court cases to enforce the provisions of the State Sanitary Code; and disqualification actions against WIC vendors who overcharged the WIC program.

Office staff developed new regulations for hospice facilities for person with AIDS, notice to emergency care providers on unprotected exposure to infectious diseases, prohibitions of the sale of tobacco products to minors, and health and sanitary standards for police station lockups.

### **The Office of Local and Regional Health**

The Office of Local and Regional Health, through its four Regional Health Offices, coordinates the Department's local health activities throughout the Commonwealth. To keep local boards of health and other health agencies informed of the scientific and technical aspects of public health, the Office organized training sessions on such issues as the legal responsibilities of members of local boards of health, AIDS, school health, community nursing, and environmental health. The four Regional Health Offices - in Rutland, Tewksbury, Lakeville and Northampton - coordinated a variety of programs for local boards of health and other health agencies that included assisting communities to explore the benefits of a regional health services program.

## **OFFICE OF MANAGEMENT AND RESOURCES**

The Office of Management and Resources includes: Fiscal Resources, Data Processing, Human Resources, Labor Relations, Affirmative Action, Central Services, and the Central Library. To assist the Department's program in responding more effectively and efficiently to the health needs of the people of the Commonwealth, the Office developed important programs in fiscal year 1988:

- \* Implemented an administration reorganization to strengthen the effectiveness and efficiency of departmental operations.
- \* Created a uniform cost analysis and operations reporting system at the seven Public Health Hospitals.
- \* Created systems for reporting the allocation of personnel resources on a regular basis.
- \* Purchased through the Central Library the compact disk for MEDLINE to enable program staff to do their own searches of the literature, a cost-effective measure - because the disk was purchased at a flat price, the more the disk is used, the cheaper the cost per search.

# Department of Public Health Expenditure Report

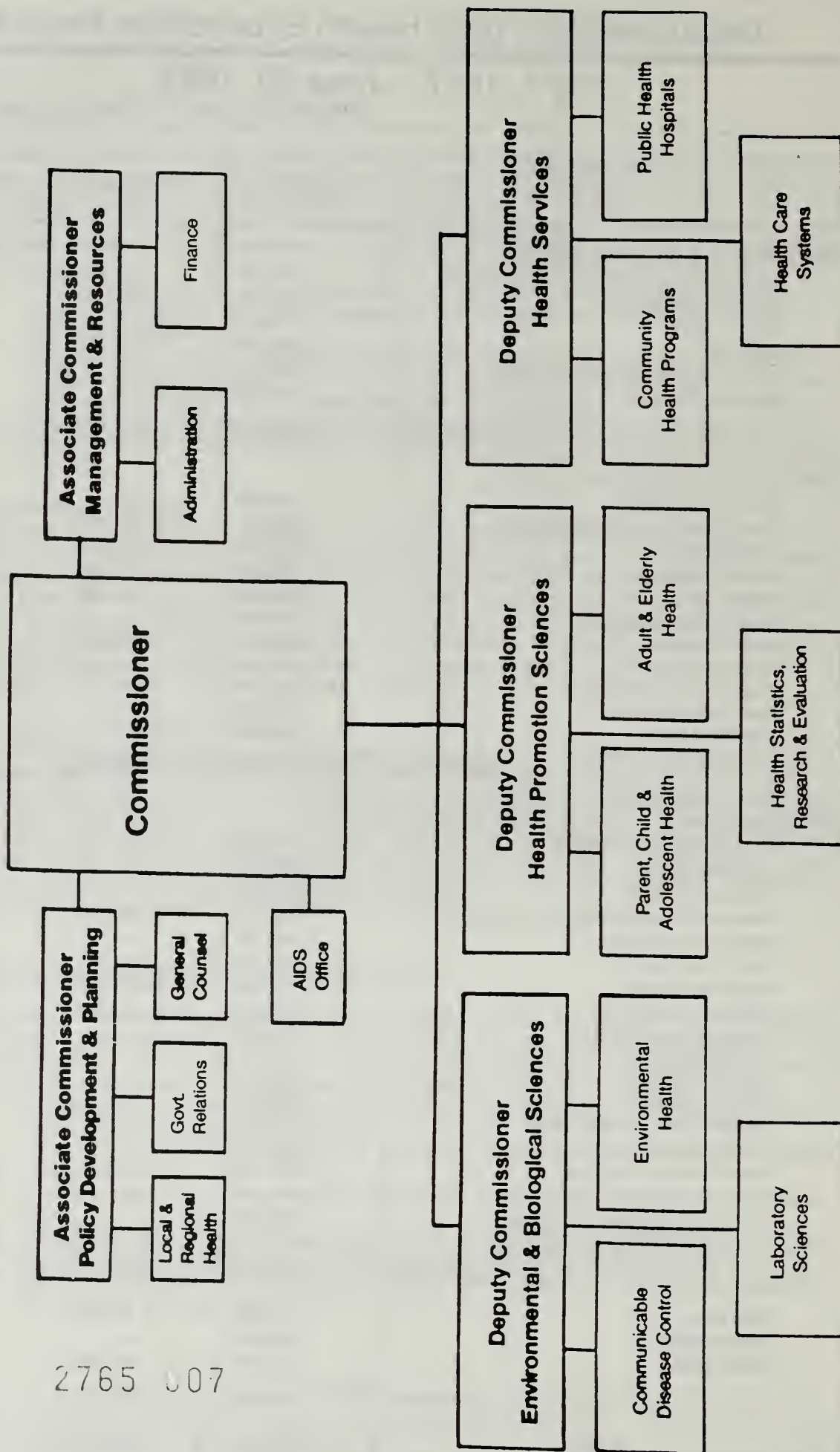
July 1, 1987 – June 30, 1988

| ACCOUNT NAME                                   | STATE          | FEDERAL       | TOTAL          |
|--|----------------|---------------|----------------|
| <i>Environmental &amp; Biological Sciences</i> |                |               |                |
| Environmental Epidemiology & Toxicology        | \$ 683,692     | \$ 79,350     | \$ 763,042     |
| Environmental Health                           | 3,553,551      | 590,253       | 4,143,804      |
| Right to Know                                  | 216,901        | ---           | 216,901        |
| State Lab                                      | 13,969,290     | 1,173,144     | 15,142,434     |
| Urea Formaldehyde Foam Insulation              | 68,311         | ---           | 68,311         |
| Worcester Hepatitis                            | 754,860        | ---           | 754,860        |
| SUBTOTAL:                                      | 19,246,605     | 1,842,747     | 21,089,352     |
| <i>Health Promotion Sciences</i>               |                |               |                |
| Alzheimer's Disease                            | 200,000        | ---           | 200,000        |
| Dental Health (and Reimbursement)              | 2,548,651      | 286,699       | 2,835,350      |
| Family Health                                  | 19,433,054     | 12,343,303    | 31,776,357     |
| Health Promotion                               | 765,752        | 1,199,482     | 1,965,234      |
| Healthy Start                                  | 7,496,852      | 56,100        | 7,552,952      |
| Healthy Start Evaluation                       | 56,100         | ---           | 56,100         |
| Health Statistics                              | 1,788,943      | 380,980       | 2,169,923      |
| Hospice Care                                   | 23,383         | ---           | 23,383         |
| Planning & Education                           | 567,104        | ---           | 567,104        |
| Post-Polio Syndrome                            | 27,509         | ---           | 27,509         |
| Preventive Health                              | 105,580        | ---           | 105,580        |
| SUBTOTAL:                                      | 33,012,928     | 14,266,564    | 47,279,492     |
| <i>Health Services</i>                         |                |               |                |
| Ambulance Reimbursement                        | 174,900        | ---           | 174,900        |
| Certificate of Need                            | 798,907        | ---           | 798,907        |
| Community Health                               | 1,562,214      | ---           | 1,562,214      |
| Emergency Medical Services (and Reimb.)        | 802,395        | 980,032       | 1,782,427      |
| Gambler's Treatment                            | 344,251        | ---           | 344,251        |
| Health Care Quality                            | 4,641,623      | 1,152,136     | 5,793,759      |
| Nutritional Services                           | 7,155,669      | 29,640,586    | 36,796,255     |
| Substance Abuse                                | 35,696,240     | 11,974,544    | 47,670,784     |
| Uncompensated Care                             | 1,000,000      | ---           | 1,000,000      |
| <u>HOSPITALS</u>                               |                |               |                |
| Cushing Hospital                               | 14,721,377     | ---           | 14,721,377     |
| Lakeville Hospital                             | 10,308,457     | ---           | 10,308,457     |
| Massachusetts Hospital School                  | 9,114,540      | ---           | 9,114,540      |
| Rutland Heights Hospital                       | 8,878,744      | ---           | 8,878,744      |
| Lemuel Shattuck Hospital                       | 23,851,246     | ---           | 23,851,246     |
| Tewksbury Hospital                             | 23,320,017     | ---           | 23,320,017     |
| Western Massachusetts Hospital                 | 7,956,155      | ---           | 7,956,155      |
| HOSPITAL TOTAL:                                | 98,150,536     | 0             | 98,150,536     |
| SUBTOTAL:                                      | 150,326,735    | 43,747,298    | 194,074,033    |
| AIDS Office                                    | 6,663,722      | 1,107,080     | 7,770,802      |
| Administration                                 | 5,664,074      | ---           | 5,664,074      |
| Local Health                                   | 867,797        | 641,682       | 1,509,479      |
| SUBTOTAL:                                      | 13,195,593     | 1,748,762     | 14,944,355     |
| TOTAL:   | \$ 215,781,861 | \$ 61,605,371 | \$ 277,387,232 |



# Massachusetts Department of Public Health

## Public Health Council



2765 007

The Commonwealth of Massachusetts  
Michael S. Dukakis, Governor

Executive Office of Human Services  
Philip W. Johnston, Secretary

Department of Public Health  
Deborah Prothrow-Stith, M.D., Commissioner  
Chairperson, Public Health Council

### **Public Health Council**

|                                |           |
|--------------------------------|-----------|
| Arthur G. Koumantzelis, C.P.A. | 1985-1987 |
| Sean Rush, M.B.A.              | 1982-1988 |
| Albert Sherman, B.S.           | 1987-1989 |
| Bertram A. Yaffe, B.Ph.        | 1984-1990 |
| James L. McGuire, M.D.         | 1984-1990 |
| Heather Laymon, M.Ed.          | 1988-1993 |

June 30, 1988  
Massachusetts Department of Public Health  
150 Tremont Street  
Boston, MA 02111  
(617) 727-2700







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